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ABSTRACT

Tables and significant figures found in a small business analysis report are explained to provide instructors with suggestions on how these items can be used by students to improve the management of small businesses. Contents of the manual are organized into two parts. Part I, The Analysis Report, contains the following chapters: (A) Business Inventories (increase or decrease, workers required, returns); (B) Income and Expense Statement; (C) Income and Expense Statement (Business); (D) Gross Margins and Net Decreases; (E) Standard Balance Sheet (business only); (F) Net Work Analysis; (G) Household and Personal Expenses; (H) Measure of Efficiency and Organization; and (I) Departmental Income and Expense Statement. Part II, Presenting Analysis Interpretation Data, contains four chapters: (A) Use of Benchmark Comparisons in Illustrating Efficiency and Organization Factors (e.g., using graphs to illustrate historical patterns, strategies to use in classroom instructions); (B) The Business Visit (e.g., planning for the first visit after the business analysis summary meeting, techniques for instructors and students to search for strong and weak points in the business); (C) Business Analysis Summary Meeting (e.g., interpreting analysis data that has impact on all students, linking differences in business to operated practices); and (D) Classroom Use of Individual and Group Data. (JH)

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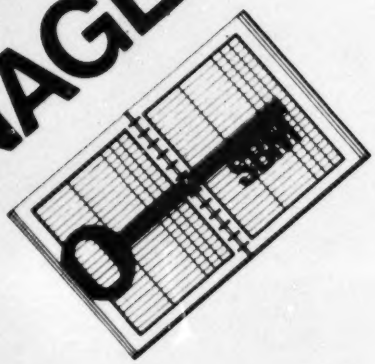

INSTRUCTOR'S MANUAL ON INTERPRETATION OF SMALL BUSINESS ANALYSIS DATA

Entrepreneurship Education For Adults— Program Development and Implementation

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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INSTRUCTOR'S MANUAL ON INTERPRETATION OF SMALL BUSINESS ANALYSIS DATA

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TABLE OF CONTENTS
INTERPRETING SMALL BUSINESS ANALYSIS INFORMATION

Page

Introduction 1

Part I. The Analysis Report 3

Chapter A. Business Inventories 5

1. Increase or Decrease
   a. Analysis of fluctuations
   b. Significance of fluctuations
   c. Application of increase or decrease in non-cash assets
2. Workers Required
3. Returns & Investments per Worker

Chapter B. Income and Expense Statement 9

1. Return to Capital, Family Labor & Management
2. Analysis of Ratios to Total Income
3. Return to Operator's Labor & Management

Chapter C. Income and Expense Statement - Business 13

1. Net Sales
2. Gross Profit
3. Net Operating Profit
4. Net Profit vs. Return to Capital, Family Labor & Management
5. Profit per Worker Unit
6. Profit per $1,000 Invested
7. Profit per $100 of Total Cost
8. Ratio Net Profit to Net Sales

Chapter D. Gross Margins & Net Decreases 17

1. Departmental Gross Margins
2. Total Returns & Net Increases
3. Total Expenses & Net Decreases
4. Return to Operator's Labor & Management - Compare Method of Computation with Table 2

Chapter E. Standard Balance Sheet - Business Only 19

1. Analysis of Beginning & Ending Assets
2. Analysis of Beginning & Ending Liabilities
3. Analysis of Gain or Loss in Equity
4. Balance Sheet Ratios
   a. Current assets/current liabilities
   b. Current liabilities/inventory
   c. Fixed assets/owners equity
   d. Land and building/long term liability
   e. Total assets/total liabilities
   f. Total assets/owners equity
   g. Cash and accounts receivable/current liabilities

Page

Chapter F. Net Worth Analysis 31

1. Asset Changes
2. Liability Changes
3. Net Worth Changes
4. Factors to Evaluate in Net Worth Analysis
   a. Return to operator's labor & management
   b. Return to capital, family labor & management
   c. Non-business income
   d. Total money borrowed - business & personal
   e. Total paid on debt - principal only - business & personal
   f. Total household & personal cash expense

Chapter G. Household and Personal Expenses 35

1. Total Household and Personal Cash Expense
2. Total Household Cash and Non-Cash Expense

Chapter H. Measure of Efficiency & Organization 37

1. Business Size
2. Labor Efficiency
3. Overhead
4. Turnover
5. Credit Control
6. Ratio Analysis

Chapter I. Departmental Income & Expense Statement 43

Part II. Presenting Analysis Interpretation Data 45

Chapter A. Use of Benchmark Comparisons in Illustrating Efficiency And Organization Factors 47

1. Benchmark comparisons using graphs to illustrate, historical patterns.
2. Graphic presentations to illustrate Benchmark comparisons for various business types
3. Charted data to illustrate comparisons with Benchmarks
4. Strategies to use in classroom instruction for illustrating Benchmark comparisons

Chapter B. The Business Visit 59

1. Procedures for distributing reports to students
2. Planning for the first visit after the business analysis summary meeting
3. Techniques for instructor & student to search for strong and weak points in the business
4. Narrative comments for individual summation for each students business analysis

Page

5. Individualized instruction built around the analysis summary for:
   a. Interpretation in relation to established business goals and objectives.
   b. Interpretation in relation to personal goals and objectives.

Chapter C. Business Analysis Summary Meeting 61

1. Interpreting business analysis data that impacts on all students
2. Linking differences in business to operational practices
3. Instructional practice useful in discovering reasons for high or low net profits without disclosing names
4. Guidelines for the students to use in interpreting their own analysis
5. The analysis meeting: A guide to successful planning

Chapter D. Classroom Use of Individual and Group Analysis Data . . 63

1. Building lessons around analysis of:
   a. Business size
   b. Labor efficiency
   c. Overhead
   d. Turnover
   e. Credit control
   f. Ratios and measures
   g. Monthly and yearly comparisons between groups and individuals
2. Increasing efficiency and improving techniques in record keeping
3. Guidelines for assisting students to learn and use correct management terms as a part of the discussion

INTRODUCTION

The use of the year end business analysis is an important step in the process of managerial decision making. As stressed throughout the entire curriculum, decision making can take place most effectively only if there are accurate business and family records from which to analyze the years activities. The Small Business Management Education Program for adults must utilize the application of the economic indices contained in the analysis report in order to attain its major objectives. Therefore, this manual will assist the instructor in the use of the analysis report through; interpretation, classroom summary meetings, the personal business visit, and the use of benchmark comparisons.

The analysis of any small business is an awesome task. For the small business operator and those concerned with the success of the business, an analysis provides basic information for decision making. While many people are concerned with the success of the small business - the creditor, the banker, the family, the chamber of commerce, and the small business management instructor, to name a few - the answer as to who makes the decisions is vital. In the socioeconomic and political atmosphere of today, the rights of the individual and obligations to them are supreme. Therefore, it is important that the instructor keep these rights and obligations in perspective during the interpretation of the analysis of an individual business and the ensuing decision making.

The purpose of the small business management analysis report is to get information about the operation so that the operator(s) can improve their management decisions. It is not, however, to be assumed that the businessperson will act without some outside influences. The family, creditors, other businesses, economic indicators, economic forecasts, income tax accountants, and small business management instructors may and probably will, to some degree, influence their decisions in management planning. As a professional in small business management education, the diversity between and among different types of business, and need for the people who invest their resources in an entrepreneurship venture to become competent in the management decision making process.

The student should expect that the instructor will help interpret the analysis reports. The degree of help may range from estimates of ratios to estimates of capital gains tax advice and from interpretations of return per $1000 invested in a specific department to the analysis of maintenance cost of a fleet of delivery trucks. The business operator should also expect the instructor to provide guidance in arriving at appropriate conclusions from the interpreted data. The above expectations must not be mistaken for decision making, even though the last one comes dangerously close depending how it is approached by the students and the instructor. The students must recognize that they are expected to think logically in making decisions after they have been given the interpretation of the small business management analysis.

The instructor may have high ideals for the expected performance of the student, based on previous instruction. Each student, however, will see their need in relationship to their stated goals or objectives. If the instructor does not direct analysis interpretation efforts toward the goals and objectives of the students which provide the motivation for a high level of performance, the student may not function well in the decision making process.

PART I. THE ANALYSIS REPORT

The first analysis report in its computer language and printout format may create some anxiety and apprehension for the business operators when they first view the printout of the analysis. Therefore, it is important that you as the instructor adequately prepare the student to feel at ease with the first copy of their own business analysis. The purpose of Part I in this interpretative guide will be to provide the instructor with some evaluative and interpretative techniques and information to be used with small business analysis data.

The information that can be derived from small business record analysis is almost unlimited. The only practical limit to the amount of obtainable information is the businesspersons determination to keep the necessary and accurate records, and their willingness to prepare the record system for the analysis. If additional analysis should be desired by one of the students, the basic accounting system should contain sufficient input data for the more sophisticated analysis. However, for the purposes of the beginning small business manager, the standard analysis report will provide the most important indicators for making the necessary management decisions.

The analysis printout is returned to the instructor within a few days after the data forms have been submitted to the computer center for analysis. The analysis should then be reviewed by the instructor for errors and omissions. As an instructor you must inform your students of the necessity for closing out the record system as soon after the close of the fiscal year as possible. Some students, primarily for tax reasons, will be slow to get their records ready for analysis. This time lag may have its benefits. It will provide the necessary lead-time for continuing with the succeeding years lessons. These lessons should indicate to the student the necessity for having at least 2 years of instruction before sufficient data about the business has been obtained to warrant sweeping changes in the organization of the business.

The correlation of analysis information with the individual goals of the family and business, and with benchmark data or indices from similar businesses, other local business analysis, and state and national trends should provide the incentive for continued enrollment beyond the three years of formal instruction.

CHAPTER A. Summary of Business Inventories

Inventories present a major challenge to most small business operators. The complexity of the amount and kind of inventory varies greatly between and within business types. A bowling alley operator has a different type of inventory than a linen supply company and a jewelers inventory differs from that of a funeral director. As a small business management instructor it should be obvious to you that variation occurs within each of these types of businesses. The complexity of the situation may increase with an increase in business size.

Inventory values, in themselves, are not meaningful comparisons between businesses, or within a specific business unless a historical pattern and/or the methods of valuation are consistant from one year to the next. However, inventory accuracy is a vital component to any small business analysis and will serve as an integral part of every portion of the report. The task of selecting a method of valuation is probably the most important student controlled variable in closing out the records and accounts for the year. This variable is going to affect the profit and loss statement, the balance sheet, and many of the related ratios which are indices used in the interpretation of the analysis to aid management decisions.

> CAUTION: Must be exercised by the instructor and the student in the interpretation of data analysis if extreme unconventional methods were used in inventory valuation.

When only one or two years of records are available and no long-term data is available, the previous statement becomes even more important. Comparisons between businesses of the same type and against national or regional benchmarks may become less meaningful and even invalid if not interpreted carefully and professionally.

Net Operating Income or Profit (T1 L699)

The figure indicated on this line is calculated so that all businesses may be compared on the basis of their profit ability. Special attention is often given to this figure as an indicator of business size. Gross income (T1 L475) is from the income & expense statement (T2.1 L475). Notice that the gross expenses do not include an amount for the operators labor. The net operating income or profit figure (T1 L699) will include what the operators got for their labor and may be described as the residual that accrues for personal labor and management in the business. In analyzing corporate businesses where wages of the operator are counted as business expenses, the operator's wages are taken out of the gross expenses (T1 LA) so that the net accrued income (T1 L699) would be reflected on the same basis as the sole proprietorship. The net operating income or profit (T1 L699) is the amount that is available for the operator to spend or reinvest in such items as family living, debt retirement, purchase of new equipment, savings, etc. This amount (T1 L699) is not an indication of the available

cash at the closing of the record period. It is simply an indicator of the amount of dollars that were available to the operator for personal draw, debt retirement, and reinvestment throughout the record period.

Number of Workers Required Full Time Equivalent (T1 LE)

The number of workers required on a full time equivalent basis, (which may be quite different from the total number of workers (T1 LB)) is another indication of business size. One full time equivalent is calculated to be equal to 2000 hours. This figure may be quite important to the operator who has several part-time employees. Many operators may use the number of full or part-time workers as a basis of expressing business size.

It should be noted in this section that if the operator worked 60 hours per week for 50 weeks in the year, one and one-half (1½) full-time worker equivalents will be used in the analysis.

Net Return Per Full Time Worker Equivalent (T1 LD)

This figure is only a relative measure between business success (as measured by net profit) and number of workers. It indicates the income per worker and if low discloses the need for either reducing the number of workers (T1 LC) or increasing the total profits (T1 L699). This figure does not indicate where the problem or successes of the various businesses may lie, but may indicate a need for further study into output per worker.

The computation of the net return per full time worker equivalent not only refers to the net operating income or profit (T1 L699) but must add back to profit the items of; paid family wages (T1 L609), employee salaries and wages (T1 L610) and payroll taxes (T1 L611). These items, when combined and divided by the number of full time worker equivalents, will give the return per full time worker equivalent (T1 LD).

Capital Investment Per Full Time Worker Equivalent (T1 LE)

The figure indicated as the capital investment per full time worker (T1 LE) is another relative resource indicator between the average amount of cash and non-cash assets and labor efficiency. This should be viewed as a relationship between the resources of labor and business assets. This amount (T1 LE) is an indicator which can be used in comparing the same types of businesses, for example, two hardware stores. There is no national benchmark as to what this figure should be, and therefore it is to be used only as a relative indicator of size, labor force, and capital investment. If the capital investment per full time worker equivalent (T1 LE) is either high or low, when compared to other businesses, it may contribute to a portion of the problem in low net profits (T1 L699).

The computation of investment per worker (T1 LE) is derived by computing the average total assets shown in Table 4. The average total assets are

calculated by totaling the total current assets (T1 L179) for the beginning of the year, the cost of bare land (T1 L181), the depreciated cost of buildings (T1 L182) and the depreciated value of equipment, fixtures and vehicles (T1 L185)(T1 L187), for the beginning of the year. The corresponding figures are totaled at the end of the year and the two figures averaged. This figure is then divided by the number of full time worker equivalents (T1 LC) to determine the capital investment per full time work equivalent (T1 LE).

Increase or Decrease in Non-Cash Assets (T1 LH)

Notice that the figure (T1 LH) excludes the cash reserves. Cash is a difficult item to get a handle on when dealing with a single proprietor business, because of the difficulty in determining if the cash reserve is a business or a personal asset. Another reason that cash is omitted from this calculation is that the increase or decrease in non-cash assets (T1 LH) is incorporated into the earnings tables in the analysis printout, Table 2.

Merchandise held for resale (T1 L121) is the inventory value of all merchandise on hand at the beginning and end of the year. It is always used in determining cost of goods sold. If a business has an inventory of merchandise held for resale it must utilize that inventory on an accrual basis to arrive at gross profit, even though expenses may be reported on a cash basis for tax purposes. There may be some discrepancy in the values of the inventory if the evaluation method was changed from the beginning of the year to the end of the year. However, this should occur very infrequently as most businesses are bound to Internal Revenue Service regulations regarding the circumstances allowable for changing inventory valuation methods. This point is extremely important in summarizing the analysis report, as a change in method may distort the entire analysis picture.

The merchandise held for resale figure (T1 L121) is used in this table to calculate a gain or loss in non-cash assets and as an indicator of the amount of stock on hand at the beginning and the end of the fiscal year. An extremely large inventory or extremely low inventory may point to problems in organization when compared to similar type businesses. This figure, however, is used extensively later on in the analysis report in such computations as total gross margin per $100 of average business inventory (T7 LL), inventory turnover (T7 LM) and the ratio of net sales to average inventory (T7 LT). These indicators of organization and efficiency are discussed in detail in a later chapter.

Bare land value (T1 L181) is entered as a constant (historical cost) value and is not depreciated.

The value for buildings is the historical cost less accumulated depreciation at beginning and end of the record year. Unless major depreciable repairs, sales and/or purchases occured during the year the analysis report will indicate the decrease in value of the business buildings due to depreciation.

Equipment and fixtures (T1 L184) along with vehicles (T1 L186) are historical costs less accumulated depreciation values used for tax and analysis purposes. A continual year-in and year-out decreasing value of depreciable assets (T1 L182, L184, L186) may indicate that the operator is living off inventory and could spell potential problems in future replacement needs. Usually the "flag" to this situation is when the owners draw exceeds net profit. As an instructor you may have to point out the necessity of an account for replacement and/or repair of depreciable items if a longitudinal study indicates the need.

The amortization of certain intangible costs (T1 L188) are allowed by the Internal Revenue Service as legitimate costs of purchasing a business. Two intangible amortizable costs (distributed out over a period of years) are allowed: 1) The incorporating costs of the business and 2) the costs involved with buying an agreement from the seller not to compete with the purchased business within a specified distance and for a specific period of time. Many business operators purchase the business for much more than the actual "book value" of the land and buildings. This extra "added" cost of buying the business in excess of the "real" value is known as "blue-sky or good will" and should be amortized over a short time period (3-5 years). It should be noted, however, that the amortization of this item is not an allowable expense for tax purposes. Recognizing "blue-sky or good will" as an asset on the balance sheet, even as a one dollar item, is useful if long-term debt reflects payments due for this item.

In summary the increase or decrease in non-cash assets is an indicator for use only within a business. For example, a great decrease in non-cash assets at the end of the year should be offset by a healthy increase in cash assets on the balance sheet. If not, an explanation should be sought. The figure (T1 LH) is used only in determining the profit or loss on an accrual basis, and in calculating the balance sheet discussed later in this manual.

CHAPTER B. Income & Expense Statement (Table 2)

This table is a non-standard income and expense statement for a business. In Table 2 the cost of merchandise purchased for resale (T2 L521), is included as an expense. This format differs from the standard profit and loss statement (T2.1) where the cost of merchandise purchased for resale (T2 L521) (including freight charges) is deducted from income as cost of goods sold to arrive at a gross profit before the expenses are deducted. Table 2, therefore, indicates the gross or total dollar income (T2 LD) of the business before any costs or expenses are deducted. Total income (T2 LD) is not only the sale of goods and services (T2 L421) but also includes family use of goods and services (T2 L870). The combination of these two indicates the total value of goods and services sold by the business (T2 LA).

The other components of total income (T2 LD) is the sale of assets (T2 L749), other business income (T2 LB), and increase in non-cash assets (T2 LC), (carried forward from Table 1). The sale of business assets (T2 L749) includes the income from sale of the business share of land, buildings, equipment and other depreciable items. Notice that this is the total amount received for the asset rather than gain or loss on the sale of the item. The remaining undepreciated value of the items are accounted for in the increase or decrease in non-cash assets (T2 LC and/or LF) which is calculated in (T1 LH). The total other business income (T2 LB) is determined by adding business income from interest, rent, royalties, purchase and volume discounts, and other business income which cannot be slotted into a specific sales and revenue category. Line C in Table 2 indicates an increase in the inventory of non-cash assets over the beginning of the year. An increase in non-cash assets (T2 LC) will usually be offset by purchases of assets on lines 760, 762, 764 and 766 on Table 2. It may also be included in an unusually large ending inventory of merchandise purchased for resale (T2 L521) or through re-evaluation as a result of depreciable assets (major repair, remodeling, etc.). The increase in non-cash assets comes from (T1 LH).

All of the preceeding discussions lead to the computation of total income (100%) for the business. Through analyzing the income ratios, the various sources of income can be determined by percentage or ratio to total.

Expenses (T2 L600)

Probably the greatest value of Table 2 is found in the expense ratio section of the table. All the expenses of the business (T2 LE) are contained here and are also shown in ratio to total income (T2 LD). It may be of value to the small business person to study these ratios, not only within their own business, but also with other businesses.

Line E on Table 2 - Total Expenses - indicates the total amount of cash expenditure made to keep the business operating for the year and also the percent of the income used for cash expenses. This figure (T2 LE) is not, however, the only indicator as to where all the money has gone in the business.

Purchase of Assets (T2 L750)

The purchase of assets (T2 L750) is also included as an expense. This section will include purchases of land (T2 L760), buildings (T2 L770), equipment and fixtures, (T2 L780), vehicles (T2 L790) and the addition of some amortizable cost (T2 L794) such as the cost of incorporation.

A decrease in non-cash assets is an indication of inventory disappearance or disposal, more rapid depreciation than asset replacement, or a lower ending inventory of merchandise purchased for resale (T1 L121). The decrease in non-cash assets comes from (T1 LH).

There are two opportunity costs in the business, the interest on investment (T2 LG) and unpaid family labor (T2 L062). The interest on investment (T2 LG) is an often overlooked expense of the small business operation, but should be one of the first expenses looked at in analyzing an investment. The business must be able to return enough to provide a reasonable return on investments before any income can be allocated to the business operator's labor and management.

Some businesses actually operate with less net profit than the interest on investment calculation. This would indicate that the business person may be more successful by selling out and investing the money and using the interest earned as a form of income. After all, if this interest income is more than the net profit - why work to make less money?

The unpaid family labor (T2 L062) must be accounted for if the return to operators labor and management (T2 LRLM) is to indicate the true return to the operator. Therefore, the value of the unpaid family labor must also be included as an expense when computing total expenditures (T2 LH).

Return to Operators Labor and Management (T2 LRLM)

In computing return to operators labor and management (T2 LRLM), subtract total expenditures (T2 LH) from total income (T2 LD). The figure (T2 LRLM) can be defined as what the business operators received for their labor & management. This figure can also be calculated by adding the value of actual interest paid (T2.1 L618) and then subtracting the value of unpaid family labor (T2 L062) and the interest charged on the investment (T2 LG) from the net business profit (T2.1 L397). The return to the operators labor and management (T2 LRLM) is what the business person uses to relate what their earnings are in relation to their employees, other occupa-
sons between businesses.

management (T2 LCLM). This is the amount of money available to the family for living expenses, debt reduction, and savings or investment. This figure (T2 LCLM), return to capital, family labor and management is identical to net profit (T2.1 L397) and will be discussed in more detail in Chapter C, which concerns Table 2.1, the "standard" profit and loss statements.

CHAPTER C. Income & Expense Statement - Business Only (Table 2.1)

This table is the standard profit and loss statement for the small business. The table is basically the same format that would be used by any accountant who would analyze the small business and provide the operator with a profit and loss statement. The ratios provided in the right column are only included in the more sophisticated analyses, except that an accountant may calculate the gross profit ratio and possibly a few more ratios for the business person.

A copy of this table and Table 4 Balance Sheet - Business Only signed by the student as being unaudited should be accepted by a banker as an indication of earnings and financial position.

Income (T2.1 L400)

The income section of this table is limited to those items which are included in net sales of goods and services (T2.1 L475) and therefore indicates only the "business generated" income. The net sales and services (T2.1 L475) figure is generated from merchandise sales, labor, income and internal and warranty parts values. This total is 100% of the "business generated" income. As an instructor, you should indicate to the operator the various percentages of the income sources. It must also be indicated that there may be up to eight lines (breakdowns) of income sources as the computor only prints the lines on which there is a dollar amount in this table.

The net sales of goods and services (T2.1 L475) is less than (and must not be confused with) the total income figure (T2 LD) because net sales of goods and services does not include family use of goods and services (T2 L870), unless billed out and charged to the draw account, sales of business assets (T2 L749) or the increase in non-cash assets (T2 LC).

The net sales of goods and services (T2.1 L475) is the amount which will be available for expenditure in the purchase of goods and services (T2.1 L598), total expenses and deductions (T2.1 L698) and for the net operating profit for the business (T2.1 L699). The ratios of these three lines will total 100% and have the same dollar value as line 475 (T2.1) the figure upon which all the ratios in this table are based.

Costs of Goods or Services Sold (T2.1 L500)

The cost of goods or services sold (T2.1 L598) is computed by first determining the value of goods or services available (T2.1 LA) then reducing this amount by the value of the ending inventory (T2.1 L121). The resulting value (T2.1 L598) indicates the total dollar value spent by the operators for the goods and services they sold during the record year.

The ratio of cost of goods sold (T2.1 L598) to net sales of goods and services (T2.1 L475) may be used to compare like businesses. More is discussed on this in the following section.

Gross Profit from Sales (T2.1 L599)

This figure (T2.1 L599) is sometimes referred to as the gross margin instead of gross profit, but both terms mean exactly the same. It is calculated by obtaining the difference between the net sales of goods and services (T2.1 L475) and cost of goods or services sold (T2.1 L598). The gross profit from sales (T2.1 L599) has to cover the operating costs and the remainder becomes the net operating profit (T2.1 L699).

The gross profit ratio (T2.1 L599) should be a relatively stable ratio within business types. Even though the dollar value of net sales of goods and services (T2.1 L475) may vary considerably, the gross profit ratio (T2.1 L599) will be relatively constant and therefore may be used as a benchmark when comparing businesses within types. Assuming that the inventories are correct, a big deviation from the average may indicate price margin or cost of service labor differences between businesses.

Expenses (T2.1 L600)

The expense statement in Table 2.1 is similar to Table 2 on lines 609 through 633. The total depreciation charged (T2.1 L634) is included, since it is a business expense. The decrease in non-cash assets is excluded from this expense statement. The printout includes only those lines on which the business showed an expenditure, therefore, if the business had no expense for advertising (T2.1 L612), line 612 would not be printed on the table. The length of Table 2.1 will vary with the number of lines used in expenses (T2.1 L600) and in income (T2.1 L400).

The main use of this section for the operator is to analyze the various ratios of the expenses to net sales (T2.1 L475). For example, if the operator was spending 4.75% of his income for telephone (T2.1 L616) and the average for all other similar businesses was 0.39%, the operator should evaluate this expense and consider if a change in telephone usage is warranted.

Net Operating Profit (T2.1 L699)

The net operating profit (T2.1 L699) figure is one of the summary items, which may also be found on Table 1 (T1 L699). This value is often used as an indicator of business size. The net operating profit figure (T2.1 L699) includes the amount taken from the business as owners draw. Other business income (T2.1 LB) is not included. Net operating profit is the amount available to the operator from business activity to spend or reinvest, for family living, debt retirement, purchase of new equipment, savings, etc. This figure is not an indicator of available cash at the close of the record period. After computing the gross profit from sales (T2.1 L599) and decreasing this amount by the amount of total expenses and deductions (T2.1 L698) the net operating profit (T2.1 L699) is determined. Attention should be focused on the ratio of net operating profit (T2.1 L699) to the gross profit from sales (T2.1 L599).

Net Profit (T2.1 L397)

By adding other business income (T2.1 LB) to net operating profit (T2.1 L699) the resulting figure is the net profit (T2.1 L397). This figure is the same figure as the return to capital, family labor and management (T2 LCLM). The system for calculation differs from one table to the next but the same incomes and expenses are eventually added in or subtracted on both Table 2 and Table 1 and therefore the same value results. The net profit value (T2.1 L397) is the total amount of money available to the family for living expenses, debt reduction, and savings or investments that were generated from the business or business activity. It does not include any personal income that was obtained through personal savings, investments, or personal income from other sources.

Supplementary Management Information (T2.1 LC)

The following management decision making factors are used to compare size and efficiency between businesses. However, they are extremely valuable to the operator when used to compare the total business to departmental labor, size and efficiency within the business.

1. Total Hours of Labor Required (T2.1 LD)

   This figure indicates the amount of labor required to operate the business in terms of hours. If an operator works 3,000 hours per year in the business, it will be indicated here. This figure when divided by 2,000 hours (50 weeks x 40 hours per week) will provide the number of full time worker equivalents (T1 LC). The labor requirement is the indicator of size and affects business efficiency.

2. Total Investment Required (T2.1 LE)

   Another measure of business size is the average of the beginning and end of the year cash and non-cash assets. This is average of the total asset values in Table 4 (T2 L199).

3. Business Profit Per Worker Unit (T2.1 LF)

   The amount of net profit earned for the business by each full time worker equivalent is indicated here. This measure of business labor efficiency is determined by dividing the net operating profit (T2.1 L699) by the full time worker equivalent (T1 LC).

4. Business Profit Per $1,000 Invested (T2.1 LG)

   Another efficiency and size factor of the total business is indicated by dividing the net operating profit (T2.1 L699) by the number of $1,000 units of average investment in the business. This is the average of the total asset values in Table 4 (T2 L199) divided by 1000.

5. Business Profit Per $100 of Total Cost (T2.1 LH)

   This is one way of determining a return on the investment in the business. It is useful in comparing between businesses and especially the total business operation to the individual departments. It is calculated by dividing gross expenses (T2.1 L598 + L698) by 100 and dividing the results into net operating profit (T2.1 L699).

6. Percentage of Net Profit to Net Sales (T2.1 LI)

   By referring to net operating profit (T2.1 L699) for the business this percentage value appears in the right hand ratio column. This ratio is a comparison of net operating profit (T2.1 L699) to net sales of goods and services (T2.1 L475). It is a measure of business efficiency and indicates the percentage of the total net income from sales available for personal draw, debt retirement, and reinvestment. The figure is used in comparing the total business operation to departments within the business.

CHAPTER D. Summary of Gross Margins and Net Decreases (Table 3)

Table 3 is unique in that the format is not found in any other accounting procedure for small business analysis. The format requires careful study. It probably will be one of the most valuable tables in the business management decision-making process, and initially the least understood of the tables. This table utilizes the same data as was used to calculate Table 2 and Table 2.1. However, it arranges the data to show the relative contribution to income from each of up to 25 different departments (T3 LA) and shows the cost of owning (including depreciation), operating and maintaining each of the items in the expense category (T3 LC).

The table is used to derive the return to the operators labor and management (T3 LRLM) which is the same figure as calculated in Table 2, but views the business from a different perspective.

This table will be of most value to the owner-operator if used over a period of years and a longitudinal chart is constructed to study the increase or decrease of departmental incomes and business expenses.

Department Gross Margins

By having an accurate set of records on inventories by department, this table will show the gross margins for each of the departments within the business. Much can be learned by computing the percentage of gross margins each department contributes to the business.

When all the gross margins from the individual departments are totaled, the result is the business gross margins (T3 L599) which is the same figure as (T2.1 L599) gross profit from sales. By adding total gross margins (T3 L599) to other business income (T3 L480) the result is the total returns and net increases for the business (T3 LB). Careful analysis of the net increases will provide the operator with a good grasp of the sources of income for their individual business.

Expenses and Net Decreases

The expense and net decrease portion of this table (T3 LC) is constructed in such a way that the expense items are summarized into one amount per item. For example, the buildings expense (T3 L182) includes depreciation, repairs and maintenance, and the difference between buildings purchased and sold. The vehicles costs (T3 L186) include purchases and sales, depreciation, repairs, gas, oil, grease, licenses and insurance for all business vehicles combined into one figure. As another example of how the expense statements in Table 2 and 2.1 are consolidated in this table, the labor costs (T3 L605) include the sum of unpaid family labor (T2 L062), paid family labor (T2 L609), payroll taxes (T2 L611), employee benefits (T2 L645) and all salaries

and wages (.2 L608 and L610). It does not, however, include the operator's personal draw. The land (T3 L181), buildings (T3 L182), equipment and fixtures (T3 L184), vehicles (T3 L186), labor costs (T3 L605), advertising (T3 L612), and utilities (T3 L613) are expense items which combine several of the cost categories from previous tables to get at the cost of "owning and operating." The remainder of the expense and net decrease portion (T3 LC) includes the same expenses as occur in Table 2 and 2.1 which were not included in one of the summation items above. A question that operators should be asking is "What does it cost me to own and operate my ____?" Since true costs are combinations of depreciation allowance, obsolesence, repairs, maintenance, operating costs, etc., having the answer to the question in a single figure can help in making management decisions about equipment replacement and maintenance.

After adding the interest on non-cash investments (T3 LD) to the expenses and net decreases column, the total expense and net decreases (T3 LE) are determined. When this figure is subtracted from the total returns and net increases (T3 LB), the result is the return to operator's labor and management (T3 LRLM). See Chapter B for another explanation for the computation of the return to operators labor (T2 LRLM). The figure is defined as what the operators earned for their labor and management after allowance has been made for the value of unpaid family labor and an opportunity cost assessed for the use of capital.

Instructors should find this table extremely valuable in assessing the relative contributions of departments and in determining the costs of owning and operating the supporting activities of the business.

CHAPTER E. Balance Sheet - Business Only (Table 4)

Table 4 is another of the standard forms used by accounting firms in the analysis of small businesses. It is commonly referred to as the standard balance sheet and is required by many creditors for use in business management evaluation.

The business balance sheet (Table 4) is a statement of an enterprise's assets (what is owned), liabilities (what is owed), and net assets or equity (what is owned less what is owed), as of the date of the balance sheet. It also may be described as what the owners would have left if they sold their business at the inventory price and paid off all the business debts on that day.

In this analysis format, several ratios are calculated in Table 4 and Table 7 to help measure the performance of various aspects of the business. If properly used and their limitations understood, the ratios can be extremely useful as planning and management tools. A number of reasons account for the wide use of ratios in business management. Most ratios compare to figures already available in the profit and loss statement or balance sheet for the business. Ratios allow easy comparison of the firm's past within an industry. They are also easily understood by most operators once an explanation has been provided. Finally, ratios may be helpful in communicating credit worthiness to outside organizations such as bankers, suppliers, etc.

In spite of all the advantages, you must emphasize that ratios are merely indicators. If a particular area of the business is headed for trouble, a change in a ratio may sound the warning. But the ratio change does not necessarily indicate the underlying cause of the problem. Comparisons between firms may be distorted by methods of computing inventories, overhead cost allocation, depreciation, etc. and may differ from firm to firm.

It must be remembered also that many ratios are products of information recorded at one point in time. In most small business firms this information is recorded only annually. The comparison of ratios from one day this year to one day last year may provide a very distorted picture if you do not account for what happened in the interim.

With this general background on the advantages and disadvantages of ratio analysis you may feel more comfortable in interpreting the ratios at the end of Table 4 and Table 7.

Current Assets (T4 L100)

For most small businesses, the assets which may normally be expected to be converted into cash, or to be used in operations, within one year after the balance sheet date, are classified as current assets. Typically current assets (T4 L179), include cash (T4 L101), petty cash (T4 L102), net accounts

receivable (T4 LB) - [Total accounts receivable (T4 L108) minus allowance for bad debts (T4 L114)], inventories (T4 L121 and L141), short-term investments (T4 L168), and prepaid short-term expenses. These figures are given for both the beginning and ending of the record period in order to make a comparison. Caution must be exercised in interpreting beginning and ending figures in Table 4 as knowledge as to what happened in the interim is not readily available from the balance sheet.

Accounts Receivable (T4 L109-L112)

The potential advantages of extending credit to the customer must be weighed against the costs involved. Sales revenue must be large enough to warrant the expense of setting up a credit system; bookkeeping, billing, credit investigation, labor, collections, and bad debts. Many small business operators have found it more economical and easier to accept credit cards instead of extending credit and risking bad debts or major delays in payments. Billing and collections are handled by the credit card company in return for a nominal discount and the business receives it's cash due generally as soon as the sales draft is deposited.

Those small business operators who handle their own credit accounts must establish and adhere to sound policies for handling credit applications, setting terms and following up on past due accounts. Slow accounts not only tie up the small businesses operating capital, but also may prevent or diminish further sales to the slow paying customer and may lead to bad debt losses.

The more stringent the small business operators credit policies, the fewer the losses incurred, but at a sacrifice of the business sales volume. In fact, many successful managers believe that a store with zero bad debt losses is not fully exploiting its sale potential.

Many situations occur every year where small businesses sell out because the operator did not use proper discretion in selecting or in being consistent with a credit policy. Becoming over-extended may run up bad debts, increase bookkeeping expense, increase collection agency fees, increase interest costs through slowing cash-flow, and substantially reduce or completely eliminate profit.

A choice must be made by the small business operator as to the extent of credit allowance. After the decision is made they must be consistant and review their credit situations regularly.

If an operator decides to offer credit, careful attention must be given to the aging of accounts receivable (T4 L108-L112). Most business operators agree that the older the account receivable becomes, the less chance that it will be collected. The following chart may provide some insight into the situation of aging accounts. Small business operators will have to make their own decisions as to the point of diminishing returns on credit allowance. The following chart generalizes on the "age of accounts receivable" problems.

Age of Account	Proportion Collectable
0-30 days	99%
30-60 days	93%
60-90 days	81%
90-365 days	55%
1-2 years	30%
2-3 years	19%
Over 3 years	Maybe Never

Do the students in your classes have accounts in all these categories? Credit policies should be economic decisions with little influence from community mores.

Fixed Assets (T4 L180)

Tangible assets of a more permanent nature which are used to carry on the operations of the business are classified as fixed assets (T4 L180). Fixed assets generally are listed in the order of their relative permanence or useful life, those with the longest useful life appearing first. The total fixed assets (T4 L190) consist of bare land (T4 L181), building (T4 L182), equipment and fixtures (T4 L184), vehicles (T4 L186), and amortizable costs (T4 L188). In each of the areas of fixed assets where a depreciation charge is appropriate, the historical (acquisition) cost of each item is listed (T4 L182, L184, L186 and L188) and the accumulated depreciation which has been charged to expense is shown as a separate amount (T4 L183, L185, L187 and L189) and is deducted from the total acquisition cost of the fixed assets. The resulting figure is called the remaining value of the fixed assets.

Special attention must be given to intangible amortizable costs (T4 L188) and accumulated amortization of intangible costs (T4 L189). The amortization of certain intangible costs (T4 L188) are legal costs in purchasing a business. Only two intangible amortizable (distributed out over a period of years) costs are allowed, the incorporating costs and the agreement of the seller not to compete within a specific distance and for a specific period of time. Many business owners purchased their business for much more than the actual "book value" of the land and buildings. This extra "added" cost of buying the business in excess of the "real" value is known as "blue-sky" and is not an amortizable cost, but may be carried as an intangible asset.

A decrease in the remaining value of the fixed assets over a period of years may indicate the business person is living on inventory or is just not replacing depreciable equipment as rapidly as necessary.

Total Assets (T4 L199)

Total assets is the total of the current assets (T4 L179) and fixed assets (T4 L199), including remaining values of intangible amortizable and non-amortizable costs.

Current Liabilities (T4 L200)

Actual or estimated amounts owed at the balance sheet dates which will have to be paid within one year are classified as current liabilities (T4 L250). They consist of total accounts payable (T4 L208) merchandise for floor plans (T4 L214) notes payable, including the portion of long-term debt coming due within the fiscal year (T4 L216 and L217), taxes payable (T4 L220 through L225) and other accrued expenses (T4 L230 and L232).

Accounts Payable (T4 L209-L212)

Current liabilities are broken down into four classifications according to the age of the debt. This is useful to all small business operators in determining the age of the debts in their business which will affect not only their cash flow, credit rating with suppliers, but also their business solvency. The same precautions against long-term accounts apply to accounts payable as discussed under accounts receivable. The comparison of beginning of the year to year end can provide some information on the ability of the operator to meet current obligations with available cash.

Long-Term Liabilities (T4 L260)

Amounts owed which will not have to be paid within a year of the balance sheet dates are classified as total long-term liabilities (T4 L295). Mortgages payable (T4 L261) and intermediate loans (T4 L262) are examples of long-term liabilities. If the current portion of long-term debt was included under current liabilities a balancing subtraction must be shown in the long-term category.

Owners Equity (T4 L300)

Because Table 4 is a "balance sheet" the total assets (T4 L199) must balance with total liabilities plus equity (T4 L390). In short, total assets minus total liabilities will equal total equity (T4 L379). Another method of determining owner's equity is to add together the owners total equity for the beginning of the previous year (T4 L310, L311, and L312, B.I.) plus additional business investment (T4 L315, B.I.) plus net profit of business in previous year (T4 L397, B.I.) and subtract the following personal draw in that year (T4 L320, B.I.) and the amount of federal and state estimated tax paid (T4 L321, B.I.). The suspense figure, which is the bookkeeping error, must be either added or subtracted to balance the books.

Suspense will usually be corrected in the "adjustments" column of a trial balance worksheet. If suspense is simply an error, then it will be found and eliminated by correcting the data on the balance sheet. If suspense occurs for an unknown reason adjustments may be made to inventories, the capital account, etc. to make the balance sheet "balance."

Notice that total equity at the beginning of the year (T4 L379, B.I.) is the same as the capital account value (T4 L310, E.I.) for the end of the previous year. By following the same calculations as used in the beginning of the year the total equity for the end of the record year can be computed (T4 L379, E.I.).

This figure is also called the business net worth and can be computed by subtracting total business liabilities (T5 L299) from total business assets (T5 L199).

Total Liabilities and Equity (T4 L390)

This figure (T4 L390, B.I. and E.I.) must "balance" with the total assets of the business (T4 L199, B.I. and E.I.).

Gain or Loss in Owners Equity (T4 LD)

Probably a better term and less confusing would be "business" equity because it does not include personal assets, liabilities and equities. This figure (T4 LD) however, is the gain or loss in the business net worth. Change in owners equity is viewed as one of the primary measures of the progress the business is making. However, if an increase has occurred you need to be alert to the possibility that the change occurred because of added investment by the owner.

Fluctuations in the Balance Sheet

As obvious as it may seem there may be some difficulties in understanding changes in the balance sheet composition.

Asset accounts may be changed by making shifts between asset accounts; cash may be increased by collecting receivables or decreased by purchasing new equipment; asset accounts may also be changed by making changes in the total amounts of assets; as assets rise equity and liability must increase the same amount. A short-term bank note increases both notes payable and cash while purchasing merchandise on account will increase both inventory and accounts payable. Explaining how such shifts in assets and liabilities occur will help operators to understand how the balance sheet works and should improve their ability to interpret balance sheet changes.

Ratio - Current Assets/Current Liabilities (T4 LE)

This ratio is widely known as the "current ratio" and is a test for solvency. It measures the liquid assets of the business available to meet debts falling due within one year. What is a good current ratio? That depends on what type of business the operator is in and the characteristics of its current assets and liabilities.

$$\frac{\text{Current Assets (T4 L179, B.I.)}}{\text{Current Liabilities (T4 L250, B.I.)}} = \text{Current Ratio (T4 LE, B.I.)}$$

The same calculation is made at the end of the year to obtain the ratio (T4 LE, E.I.)

Is a current ratio of 2.1 to 1 good and should the small business operator be reasonably satisfied with this performance? No one can answer this with an unqualified yes or no.

A general popular rule of thumb for the current ratio is 2 to 1, but this depends strictly on the nature of the business. The following ratios were determined from the Annual Statement Studies, 1974 Edition, Robert Morris Associates. Businesses with $250,000 or less gross income* were used and only the 25% most profitable and 25% least profitable business averages and ranges are listed. These are "ball-park" figures only and will not tell the whole story.

Current Ratio Summaries

Industry	Ratio Range Most Profit.	Approx. Avg. Most Profit.	Ratio Range Least Profit.	Approx. Avg. Least Profit.
Wholesaling	1.8 - 4.8	2.4	.9 - 1.7	1.3
Retailing	1.2 - 4.1	2.5	.3 - 1.7	1.4
Services	.7 - 6.0	1.7	.1 - 1.1	.6
Contracting*	1.2 - 2.8	2.0	.8 - 1.3	.9

*Contracting with incomes of one million or less were used.

Let's take some examples. Assume that a small business has current assets of $30,000 (T4 L179) and current liabilities of $15,000 (T4 L250) for a ratio of 2:1. If this firm would buy $10,000 worth of merchandise on account the inventory (T4 L121) would increase by $10,000. At the same time the accounts payable (T4 L209) would also increase by $10,000. With corresponding assets of $40,000 and liabilities of $25,000 the new ratio would be 1.6:1.

Going back to the original figures, suppose the operator, instead of buying more merchandise on account, pays bills amounting to $8,000 with cash (T4 L101). This will decrease the current assets (T4 L179) by $8,000 (cash) and also decrease total accounts payable (T4 L208) and therefore total current liabilities (T4 L250) by $8,000. The resulting assets of $22,000 and liabilities of $7,000 provides a current ratio of 3.14:1.

The general principle of the current ratio is in comparing an individual company to the industry. A higher current ratio indicates that prompter payments of claims of creditors can be expected.

Ratio - Current Liability/Inventory (T4 LF)

This ratio shows the relationship to the amount of capital invested in merchandise and secondary merchandise inventories and the amount of current liabilities.

$$\frac{\text{Total Current Liabilities (T4 L250, B.I.)}}{\text{Merchandise Inventory (T4 L121, B.I. plus L141, B.I.)}} = \text{Current Liability/Inventory (T4 LF, B.I.)}$$

The same calculation is made at the end of the year to obtain the ratio (T4 LF, E.I.). The ratio can be useful as another measure of the liquidity of the business. Can all current liabilities be satisfied if the inventory was liquidated? While industry averages may be difficult to find, the measure overtime determines if the current liabilitiy is being increased or decreased due to non-inventory expansion. If the ratio declines (showing less current indebtedness in relationship to inventory) there is some indication that the firm is more stable. If on the other hand, current liability increases in relation to inventory, the business is in a poorer position to retire current debt through inventory turnover.

Ratio - Fixed Assets/Owners Equity (T4 LG)

This ratio shows the relationship between investment in plant and equipment and the owner's equity. It indicates how liquid the net worth (equity) is. The higher this ratio, the less the small business operator's capital is available for use as working capital, to meet debts and payrolls, pay bills, or carry receivables. It is generally not advisable for the small business operation to have more than 75% of its tangible net worth (owners equity) represented by fixed assets. However, as in other ratios, this is so dependent on the type of business that no specific ratio is acceptable for all businesses.

$$\frac{\text{Fixed Assets (T4 L190, B.I.)}}{\text{Owner Equity (T4 L379, B.I.)}} = \text{(T4 LG, B.I.) Ratio: Fixed Assets/Owner Equity}$$

The same calculation is made at the end of the year to obtain the ratio (T4 LG, E.I.), Fixed Assets/Owners Equity.

The presence of a substantial amount of "leased" fixed assets (T4 L190) may deceptively lower the ratio. Here is an example. Assume that a small business has $30,000 in fixed assets (T4 L190) and equity (T4 L379) of $20,000, his/her ratio is 1.5:1.

According to our previous statement of a goal of no more than 75% equity in fixed assets, their ratio of 150% is too high and might create a concern on the part of the creditor and the operator.

It may be more meaningful to get more in the "ball-park" of suggested guidelines. If one had $30,000 in fixed assets (T4 L190) and a tangible net worth (equity) (T4 L379) of $50,000, the ratio of .611:1 or 60% is much more realistic. This indicates only 60% of the equity is in fixed assets.

Unfortunately, this ratio is not easily changed or managed if fixed assets have already been purchased. Since the assets are not liquid, they cannot easily be diverted back to some other form. The ratio should serve

as a flag to businesses that are considering adding to otherwise acquiring operator owned facilities. If the purchase or construction would drive the ratio of fixed assets to owners equity too far out of line, the operator should consider other alternatives for use of business capital.

Ratio Land and Building/Long-Term Liabilities (T4 LH)

This ratio, sometimes referred to as the "fixed ratio," indicates the relationship between the depreciated inventory value of the business assets in land and buildings and the amount owed in long-term liabilities. This ratio is useful in determining a ratio of between book value of your real estate and amount owed on it. Notice it is a type of real estate solvency ratio. Long-term liability in this ratio should not include any amounts owed for machinery or equipment purchases which may have been established on a long-term repayment basis.

$$\frac{\text{Depreciated Land and Building Value (T4 L181, B.I. plus L183, B.I.)}}{\text{Long-Term Liabilities (T4 L295, B.I.)}} = \text{Ratio: Land and Building to Long-Term Liabilities (T4 LH, B.I.)}$$

The same calculation is made at the end of the year to obtain the rate (T4 LH, E.I.).

The absolute size of this ratio is not as important as its relationship to other ratios. Most business operators recognize that long-term liabilities have special characteristics - long repayment terms, relative safety (especially in an inflation economy), lower and more stable interest rates than other forms of credit, and more complex procedures for creditors to affect mortgage foreclosure.

Operators should look for up-side-down credit or ratios that reflect poor borrowing practices. Note the following example:

	Ratio	Assets	Liabilities
Current Ratio	1.8:1	52,200	29,000
Fixed Ratio	6.3:1	51,660	8,200
Net Capital Ratio	2.79:1	103,860	37,200

In this case, the operator is at a distinct disadvantage by having so little equity in working assets and inventory. Look at the disadvantages of short or intermediate term credit compared to long-term; short repayment period, contributing to a heavy cash flow drain, higher interest rates and lack of safety under adverse conditions. The business is solvent, but the credit position could be improved by realigning the credit objective. In some instances, such realignment may require refinancing the fixed assets to provide money to reduce short term and intermeditate debt. Let's look at the ratios above if the owner was able to refinance long-term asset at the rate of 80% of net asset value. The owner would need

only $37,200 to finance all of the current and long-term debts. The operator could obtain as much as $41,328 if the lender used the 80% rule on long-term assets. The ratios would now look quite different.

	Ratio	Assets	Liabilities
Current Ratio	None	52,200	-0-
Fixed Ratio	1.39:1	51,660	37,200
Net Capital Ratio	2.79:1	103,860	37,200

The operator would be freed of the high cash demands of short-term credit and would be more at ease with the liquidity position.

This illustration is not to suggest that the operator should not have any short-term debt, but rather to suggest that in some instances there is a "best use" of money borrowing ability.

Ratio Total Assets/Total Liability (T4 LI)

This ratio, sometimes referred to as the "net capital ratio," indicates the relationship of the total capital included in the business assets and liabilities. Notice that this ratio includes the fixed assets and long-term liabilities where the current ratio included only current assets and current liabilities.

$$\frac{\text{Total Assets (T4 L199, B.I.)}}{\text{Total Liabilities (T4 L299, B.I.)}} = \text{Net Capital Ratio (T4 LI, B.I.)}$$

The same calculation is made at the end of the year to obtain the ratio (T4 LI, E.I.).

Creditors would view the net capital ratio as a measure of the overall credit health of the business. They may have some magic number like 2:1 that they would consider as the minimum ratio the business should maintain. However, new businesses that depend on a higher proportion of borrowed capital may find a smaller ratio acceptable to the lender.

Ratio Total Assets/Owners Equity (T4 LJ)

This ratio includes the intangible assets included in the total asset figure and relates the total assets to the tangible net worth (owner equity) in the business. The inclusion of the tangible assets yields a ratio figure indicative of the total capital invested in the business to the net worth (owner equity).

$$\frac{\text{Total Assets (T4 L199, B.I.)}}{\text{Owner Equity (T4 L379, B.I.)}} = \text{Ratio Total Assets/Owners Equity (T4 LJ, B.I.)}$$

The same calculation is made at the end of the year to obtain the ratio (T4 LJ, E.I.). It's a simple measure that says, "What part of my business

investment do I own?" The measure is the converse of the net capital ratio, but is preferred by some lenders.

When there are intangible assets involved, the operator must be cautious in the interpretation of this ratio.

The relationship of net capital ratio to ratio: Total assets to owners equity is shown below:

Comparisons of Ratios

Net Capital Ratio to Ratio of Total Assets to Owners Equity

Total Assets	Total Liabilities	Owners Equity	Net Capital Ratio	Ratio: Total Assets to Owners Equity
100,000	10,000	90,000	10:1	1.11:1
100,000	20,000	80,000	5:1	1.25:1
100,000	30,000	70,000	3.3:1	1.43:1
100,000	40,000	60,000	2.5:1	1.67:1
100,000	50,000	50,000	2:1	2:1
100,000	60,000	40,000	1.67:1	2.5:1
100,000	70,000	30,000	1.43:1	3.3:1
100,000	80,000	20,000	1.25:1	5:1
100,000	90,000	10,000	1.11:1	10:1

Quick Ratio - Cash & Accounts Receivable/Current Liabilities (T4 LK)

The quick ratio commonly called the "acid test" ratio is often used in lieu of the current ratio (T4 LE). Current assets are those which can be easily converted into cash within one year. However, some criticize that this does not indicate a strong liquid position because money tied up in inventories is not readily converted into cash. Rapid liquidation of inventories and accounts receivable, etc. could greatly reduce their current value. To get around these problems the "acid test" or "quick" ratio was developed. The "current ratio" was modified so that the only assets included are the cash and accounts receivable. The instructor must caution the operator if many of the accounts receivables are over 90 days old as they are likely not to be a liquid asset.

$$\frac{\text{Cash (T4 L101 + L102, B.I.) + Accounts Receivable (T4 LB, B.I.)}}{\text{Current Liabilities (T4 L250, B.I.)}} = \text{Acid Test Ratio (T4 LK, B.I.)}$$

The same calculation is made at the end of the year to obtain the ratio (T4 LK, E.I.)

Current literature in the field reveals that a ratio of more than 1:1 will tend to indicate a higher profitability than a value of less than 1.

This ratio is of particular benefit to short-term creditors, as it expresses the extent to which cash and those assets most readily convertible into cash can meet the demands of current liabilities. Any value of less than 1 to 1 implies a reciprocal "dependency" on inventory or other current assets to liquidate short-term debts.

Summary on Ratios

In developing the ratios in the analysis, the authors first determined what they wanted to measure. Then they selected the most important ratios for their use. Next they determined standards both internal and external to the firm to use as benchmarks in evaluating results. The internal standards are seen as a part of this text and in Part II, and were developed by the authors. The external standards were derived from Robert Morris Associates and Dunn and Bradstreet materials. These benchmarks are included in both Part I and II. The review process should be continuous.

At best, ratios are useful estimations. They do not reflect cash flows, and using them constantly may slow normal estimation procedures, especially when used without full knowledge of their derivation and application. However, when personnel, time and capital funds for financial help are limited, and when ratios are understood by the small business operator they can be helpful in the decision making process.

CHAPTER F. Net Worth (Table 5)

A good net worth statement will disclose not only gain or loss in net worth (T5 LJ) but soundness of the financial situation, distribution of indebtedness, security for additional credit, and equity in the business. The net worth statement in this analysis combines the business assets and liabilities with the personal assets and liabilities. The resulting amount, net worth (T5 LI, E.I.) could be defined as what the business family would have left if they sold all their assets, business and personal, and paid off all their debts, both business and personal. The combined net worth figure is used because owners (especially sole proprietors) have the opportunity to readily sort cash items back and forth between personal and business. Therefore, the combination of the business and personal net worths provides a concise and realistic net worth of the small business operator.

Change in Total Net Worth (T5 LJ)

The growth figure (T5 LJ), also called the change in total net worth is not a true indicator of the business net worth (T5 L199 minus T5 L299). Gain in net worth might result from a gain in personal equity and not a gain in equity in the business. The shifting of equity to personal rather than business sources should not be thought of as being an incorrect business practice. It should be recognized and understood by the small business management instructor that the total net worth gain is a more valuable indicator of family progress than just a gain in business equity. The procedure of shifting equity to the personal side of the ledger (and vice versa) is commonly followed by many small business operators.

Management instructors should be alert to any excess shifts to equity to the personal assets if such shifts are detrimental to the soundness of the business enterprise. Most businesses would expect to exhibit a practice growth in the business net worth.

The business net worth (T5 L199, E.I. minus T5 L299, E.I.) is the same figure as the owners equity in the business (T4 L379, E.I.)

Return to Operators Labor and Management (T5 LRLM)

The lower portion of Table 5 contains information which is valuable in describing the total financial picture of the small business. The return to the operator's labor and management (T5 LRLM) is the same figure as on Table 2. This figure indicates the amount the operator received for labor and management.

Return to Capital, Family Labor and Management (T5 LCLM)

When the interest on the investment (T2 LG) and the value of unpaid labor (T2 L062) is added to the return to the operator's labor and management

(T2 LRLM) and the value for interest paid (T2.1 L618) is subtracted the result is a figure known as the return to capital, family labor, and management (T5 LCLM). This is the amount of money available to the family for living expenses, debt reduction, and savings or investment. This figure (T5 LCLM) is identical with the net profits figure (T2.1 L397) which was discussed in Chapter C.

Non-Business Income (T5 L088)

The total amount of income received by the family and operator for all earnings not related to the business is classified as non-business income. Examples may be interest on personal investments, odd-jobs, paper routes, a farm, other businesses, and non-business related second jobs.

Total Money Borrowed - Business & Personal (T5 L070)

This figure is self-explanatory in that it is the total money borrowed by the operator for business and personal reasons during the year. It can be studied in relation to other businesses, from year to year, but most important is to compare it to the amount paid on debt (T5 L074). These two figures (T5 L070 and L074) are necessary in reviewing the net worth statement above.

Total Paid on Debt - Principal Only - Business & Personal (T5 L074)

Because payment on principal is not a tax or business deduction it is not listed as a part of the small business analysis except on this table. A measure of debt payment (T5 L074) is helpful, as is the amount borrowed (T5 L070) in interpreting the cash on hand (T5 L101) and other non-business assets (T5 LD) in the net worth statement.

Total Household and Personal Cash Expense (T5 LK)

This figure is from Table 6 (T6 LC) and is fully explained in the next chapter. The amount spent for household and personal cash expenses is valuable on the net worth statement for computing accuracy of records.

Quick Check on Record Keeping Accuracy

Because both personal and business records are incorporated into Table 5 in determining the net worth, it is possible to check the accuracy of the records. Any discrepancy found will not indicate where the error was made, but only that one was made and must be considered in the analysis interpretation. A simple check on record accuracy is:

> Return to capital, family labor and management (T5 LCLM) plus non-business income (T5 L088) indicates total spendable income. Since change in net worth (T5 LJ) plus total household and

personal expenses (T5 LK) are only places money could have gone, this total should be equal to the total spendable income.*

*This may not always be correct in that there is a potential for double counting of personal capital expenditures (T6 L760-L790) and gain in personal assets (T5 LE).

Note that when the return to capital, family labor and management (T5 LCLM) is added to the non-business income (T5 L088) the sum is usually larger than the combination of net worth change and personal expenses. It has been found that operators generally keep relatively accurate records on income but there is the potential for some "slippage" in recording the household and personal expenditures on Table 6 and a greater chance of not listing all business expenses than business income. Therefore a positive discrepancy is usually noted in the above formula if there is an error in the records.

The amount of error that is tolerable is not easily defined. Error tolerance depends on the general accuracy of the entire record keeping system but particularily on the household and personal expenditure records. The goal of every operator should be to come within 1% error on the above formula.

CHAPTER G. Household & Personal Expenses (Table 6)

Many considerations are applicable to the household and personal expense table, such as adequate standard of living, adequate family protection, accounting for total expenditures, reference to net worth statement (Table 5), income tax, and social security payments.

Most operators will find their greatest amount of "slippage" in accounting for personal expneditures. This is common, but if a total family operation is to be analyzed accurate records for developing Table 6 make the analysis more meaningful.

Adult Equivalents per Family (T6 L095)

This figure is the average amount of family labor force available to the business during the year. It is not necessarily the amount used however. "Could I operate my business totally with family labor?" This question can be answered by comparing the number of workers required, full time equivalent (T1 LC) with the adult equivalents per family (T6 L095).

Household and Personal Expenses (T6 L800)

This section is relatively basic and requires no lengthy discussion or interpretation. One might, however, remember that some of the personal capital expenditures (T6 L760-L770) may also show up on the net worth statement as personal assets (T5 LE). This in turn would increase the net worth (T5 LI) and the change in net worth (T5 LJ). This point is significant only when doing calculations on Table 5 when the change in net worth and personal expenses are combined in determining record keeping "slippage."

Family Use of Goods and Services (T6 L870)

Any time the operator uses goods and services from the business for personal gain or consumption the value of the goods or services should be listed in this section. Examples may be the purchasing of food for the home through your restaurant, furniture from your furniture store, etc. This not only affects your household and personal expense table but also affects the rest of the tables in the analysis.

CHAPTER H. Measures of Business Organization And Efficiency (Table 7)

The management of a business can be assessed by addressing two basic questions; how are the resources of the business organized? and how efficiently are the resources being used? Table 7 attempts to organize the various measures of organization and efficiency in a manner that will contribute to answering the second question. Table 7 utilizes data from other tables that stress the basic organization of resources in the business. Efficiency measures on this table may be considered to be basic tools of management.

Business Size Factors (T7 LA)

Average business investment (T7 LB) is the average of the total assets of the beginning and end of the year, [(T4 L199, B.I.) + (T4 L199, E.I.) ÷ 2 = (T7 LB)]. Many times operators will discuss size of business and this descriptive term is used. It reflects not the net worth or owner equity or income but only what the average investment is. This figure is valuable when comparing investment to others like business and net profit.

The total gross margin value (T7 LC) is sum of net sales of goods and services (T2.1 L475) minus the costs of goods or services sold (T2.1 L598). The gross margin value (commonly called gross profit) (T7 LC or T2.1 L599) is often referred to when discussing business volumes and size. This figure is the amount of dollar volume required to cover operating expenses, and the remainder is the net operating profit.

Yearly worker equivalent (T7 LD) is the average number of full-time employees the business had during the year. This figure may also be used to express business size as, "Oh, I employ about 8 full time and 6 part time employees during the year." This average figure is quite important to the operator who employs several part time workers.

Labor Efficiency (T7 LE)

The gross margin per worker (T7 LF) is total business margin (T7 LC) ÷ yearly worker equivalent (T7 LD). This figure indicates the total amount of gross profit each of the employees earned for the business, and measure the productivity and efficiency of the labor force in the business.

The total business investment per worker (T7 LG), average business investment (T7 LB) ÷ average number of full time workers (T7 LD) is the average value of the businesses assets that is allocated to each worker for productivity. Worker efficiency, as measured by gross margin per worker (T7 LF), may be restricted by a small investment per worker (T7 LG). The level of investment per worker is dependent on the size and type of business.

Overhead (T7 LH)

Total expenses per $1,000 of gross margin (T7 LI) is businesses total expense and deductions (T2.1 L698) ÷ gross profit (margin) from sales ÷ 1000 (T2.1 L599 ÷ 1000). The figure expresses the amount of expenses incurred for each $1,000 of gross income from the business. An inverse of this would be to indicate that for each $1,000 of gross sales (T2.1 L599 ÷ 1000) minus total expenses per $1,000 of gross sales (T7 LI) would present the net operating profit per each $1,000 of gross sales.

The total expenses per worker figure (T7 LJ), is computed by dividing total expenses and deductions (T2.1 L698) by average full time worker equivalent (T7 LD). It is the amount of operating expenses each person is allotted in the business. If the total expenses per worker (T7 LJ) is subtracted from the gross margin per worker (T7 LF) the resulting value is the net operating profit per worker.

Turnover (T7 LK)

"How much gross margin is the business turning out per $1,000 of average business inventory (investment)?" This question can be answered by dividing the total gross margin for the year (T7 LC) by the average business investment for the year (T7 LB) ÷ 1000. Inventory turnover (T7 LM) is a function of how well working capital is being managed. Many alternative combinations of balance sheet and income and expense statement data may be utilized to develop such a measure. A common method (used in this analysis) is to divide net sales (T2.1 L475) by the sum of the primary (T4 L121) and secondary ending inventories (T4 L141).

Turnover ratios that are low relative to an appropriately developed standard, suggests that working capital that might be used more productively elsewhere in the small business is tied up in merchandise inventory. On the other end of the scale, an extremely high ratio value for a specific business types may indicate being out of stock, at times, and therefore not reaching maximum sale. Notice that this particular form of computing inventory turnover used the ending inventory in the denominator, which may or may not have been typical of the situation throughout the year.

Credit Control (T7 LN)

If the net sales (T2.1 L475) is divided by the year and total accounts receivable (T4 LB), the resulting figure is receivable turnover (T7 LO). As with other indicators, this ratio is based on a specific point in time and therefore may not be typical of the entire year. A higher ratio, a higher turnover of receivables as it is sometimes called, indicates a more rapid collection of sales during the period and greater liquidity of the receivables.

Now if the same two figures are inverted and divided by 360 days, the average amount of time in the collection period can be determined.

$$\frac{\text{Year-End Total A/R (T4 LB)}}{\text{Net Sales (T2.1 L475)} \div 360 \text{ days}} = \text{Average Collection Period (T4 LP)}$$

"What determines if a specific collection period as being good or bad?" Primarily the businesses' own credit policy as well as the direction or trends from year to year. The collection figure indicates the number of days of sales on the books or to put it another way the number of days taken to collect accounts receivable. Current literature indicates that the average collection period should not exceed 1 1/3 times the credit terms of the business. In other words, if the business has a 30 day net policy, the average collection should not exceed 40 days.

Ratio of Percent of Net Operating Profit To Net Sales (T7 LR)

The ratio measures the rate of profit on net sales, based on the figures in the information in Table 2.1 the business income statement.

$$\frac{\text{Net Operating Profit (T2.1 L699)}}{\text{Net Sales (T2.1 L475)}} = \text{Profit On Net Sales (T7 LR)}$$

The resulting percentage is that part of total sales remaining after all expenses have been deducted. This rate is most useful when the figures are compared with those of businesses comparable in size, method of ownership, and type, or when trends within the business are compared over a period of years.

Notice that the percent of net operating profit to net sales is also provided as the ratio figure for net operating profit (T2.1 L699). This ratio is especially important when considering a departmental analysis as to source of income and which departments are most profitable. More is discussed on this in Chapter I.

Ratio of Net Sales To Owners Equity (T7 LS)

This ratio reflects the activity of the owner's capital during the year.

$$\frac{\text{Net Sales of Goods \& Services (T2.1 L475)}}{\text{Owners Equity - Ending Inv. (T4 L379, E.I.)}} = \text{Sales to Equity Ratio (T7 LS)}$$

The small business operator invests capital in an operation in hope of a substantial return. The probability of such a return is dependent largely on the activity of the money invested. The sales to equity ratio (T7 LS) is one measure of the activity. When this relationship shows an increase from year to year, it indicates that the small business person's investment is being used more frequently during the year. A very high ratio may indicate a lack of sufficient operating capital and possible overtrading.

Ratio Net Sales To Average Inventory (T7 LT)

Known as a "stock to sales" ratio, this hypothetical "average" inventory turnover figure is valued for purposes of comparing one small business to another or with industry averages.

$$\frac{\text{Net Sales (T2.1 L475)}}{\text{Average Inventory (T4 L121 B.I. + L141 B.I. + L 121 E.I. + L141 B.I.) + 2}} = \text{Net Sales To Avg. Inventory (T7 LT)}$$

Inventory turnover shows how fast the merchandise in the business is moving. It gives the operator an idea of how much capital is tied up in inventory to support the business operation.

If the ratio value is 3.3 it indicates that the inventory of the business "turned-over" 3.3 times during the year. Usually the higher the turnover rate the better as the business has been able to operate with a relatively small investment in inventory. This large ratio figure may also indicate that inventories are current and saleable. However, if the ratio goes too high for the type of business being operated it may mean inventory shortages and customer dissatisfaction.

What then should the inventory turnover be? The desirable rate depends on your line of business, level of business activity, and method of valuing inventories, as well as economic trends in society. Inventory turnover is a much better guide to follow than just inventory size. A large inventory may represent a recent purchase to support growing sales or it may represent a decline in sales and the subsequent building in inventory. In the first case inventory turnover ratios will either stay the same or increase. Where in the second case, it declines. Thus, the reason for computing and evaluating inventory turnover ratios is that a decline in the ratio value will alert the small business operator that trouble is at hand.

As in average collection period ratios the inventory ratio should be at monthly or bi-monthly intervals if adjustments are needed or a potential problem exists.

If the business has departmental sections with records, the inventory turnover ratio can be computed on each section to evaluate efficiency.

Ratio Net Sales To Working Capital (T7 LU)

Known as turnover of working capital, this ratio also measures how actively business cash is being put to work in terms of sales. This uses only liquid net assets and does not include invested capital or long-term debts.

$$\frac{\text{Net Sales (T2.1 L475)}}{\text{Year End Current Assets (T4 L179 E.I.) Minus Year End Current Liability (T4 L250, E.I.)}} = \text{Net Sales to Working Capital Ratio (T7 LU)}$$

Net working capital represents the basic support for the assets changing from inventory, receivables, and cash during the year. The comparing sales to working capital reveals the number of times the working capital "turns" during the year.

A low ratio shows unprofitable use of working capital; a high one, vulnerability to creditors, because of overtrading of capital. The ratios for business types vary all over the place from 9-36 for most profitable wholesales to a minus 45 for the least profitable in service business.

Return Per Hour On Operator and Unpaid Family Labor (T7 LV)

This ratio answers the question, "How much money per hour did my family and I make this year?" A very good question especially if it is nearly the same as the hourly wage of the employees or as the operator could earn working for someone else. It may bring up the comment, "Boy, I like being independent but this is a pretty high price to pay especially if the return per hour on operator and unpaid family labor is less than that of the companies employees.

$$\frac{\text{Return Per Hour on Operator \& Unpaid Family Labor (T2 LRLM + T2 L062)}}{\text{Hours Worked by Operator (F2A 064A + Hours Worked by Unpaid Family Labor (F2A 060A)}} = \text{Return Per Hour On Operator \& Unpaid Family Labor (T7 LV)}$$

Percent Return On Business Investment (T7 LW)

$$\frac{\text{Net Operating Profit (T2.1 L699)}}{\text{Average Business Investment (T7 LB)}} = \text{\% Return on Business Investment (T7 LW)}$$

This ratio is a measure of asset earning power. This ratio is the "best guide for appraising the overall earning power of a business."[1] It develops a percentage figure based on operating profit and business investment. It answers the question of "Would I be better off going out of business investing my assets?"

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[1]Adapted from SBA H15, "A Handbook of Small Business Finance"

CHAPTER I. Departmental Income And Expense Statement (Table 9)

Before going into this table it is necessary to read Part I, Chapter C - Income and Expense Statement - Business Only (Table 2.1) and Part I, Chapter D - Summary of Gross Margins and Net Decreases (Table 3). Both of these chapters relate to the Departmental Income and Expense Statement (Table 9). The Income and Expense Statement - Business Only (Table 2.1) has the indentical format as Table 9. It is, in fact, a summation of all the individual Table 9's.

Each of the Table 9's is a "mini-business" or a departmental income and expense statement. Each department is separate but not necessarily mutally exclusive of each other because of the sharing of workers, facilities, etc. The departments would become mutually exclusive only if complete and separate employees, overhead costs, etc. could be specifically identifiable to a specific department.

Not all businesses can or should be departmentalized. It is important for the instructor and the business operator to realize this before attempting a business reorganization. This fact is extremely important in the first year of instruction. The instructor should review Year III Unit 3 Evaluating Departmental Selections for additional information as to why and how to departmentalize.

The business may be departmentalized by function, product line, product group, location, manufacturers sequence, etc. The method of allocation of expenses is also a major factor in determining departmental selection.

During the first year of instruction, the business operator may choose not to departmentalize because of a lack of expertise in recordkeeping, knowledge of their business and personal and business goals and objectives.

Personal and business goals and objectives have been discussed previously but a reemphasis of this lends itself quite well to this chapter. At a minimum the business goals and objectives must be established before successful departmentalization can be expected. The problem of setting up departments because it's the "in" thing does no one any good. It burdens the instructor with a larger workload and the operator with more detail. The operators must have a basic idea of what they want out of the business and with the help of the instructor the paths by with to reach them can be found. Departmentalization is an extremely good tool to reach the goals and objectives but it will not function without the prior determination of where am I going and how do I get there.

Historically it has been found that departmentalization is implemented at the end of the first year of instruction. A process of refinement continues from this time on. Many businesses will initially departmentalize into

anywhere from two to six departments. As these departments are utilized, quite often it is found that the management information gained is not useful. This factor should not discourage the instructor or the business operator. It is merely a warning sign that the selection of departments should be reexamined, refined and if necessary completely restructured. This course of action should be anticipated by the instructor and explained to the business operator. This will help alleviate the potential problems of a loss of confidence, interest and faith that the operator may experience if the original departmentalization does not work out perfectly.

In analyzing Table 9 it must be emphasized that the net sales of goods and services (T9 L475), cost of goods or services sold (T9 L598) and gross profit from sales (T9 L599) should be actual figures from the business records not a pro-rated or percentage allocation.

All figures from the expense section of Table 9 are to be allocated among departments in one of several ways. First, a rule of thumb is that "labor cost is directly proportional to gross profit." Therefore, unless more precise figures are available, the labor costs should be allocated according to departmental gross profit contributed to the entire business operator. The square footage method is used quite often to allocate building, utility and other overhead expenses. With a good accounting system most of the other expenses should be directly attributable to the specific departments.

It must be emphasized that it takes anywhere from 3 to 5 years to accumulate the necessary departmental comparative data. Therefore, instructors and business operators should be forewarned against placing to much confidence on the first two years of departmental information. As the years progress, refinement continues and the information received from the analysis becomes more accurate and meaningful. Various charts and forms for the plotting of information are found in Part II.

PART II. PRESENTING ANALYSIS INTERPRETATION DATA

The small business management students will be extremely apprehensive when they receive their first annual analysis. The numerous tables, format and contents are something that the student may never have encountered before. It is your job as the instructor to alleviate as much of this apprehension as possible. This can only be accomplished by a thorough understanding of the tables and the ratios presented. To make the information valuable, outside information should be used when possible. Trade journals, Dun & Bradstreet ratios, industry trend publications, etc. provide a wealth of supportive data. These, plus the students own historical data can provide the information necessary to make an effective interpretation.

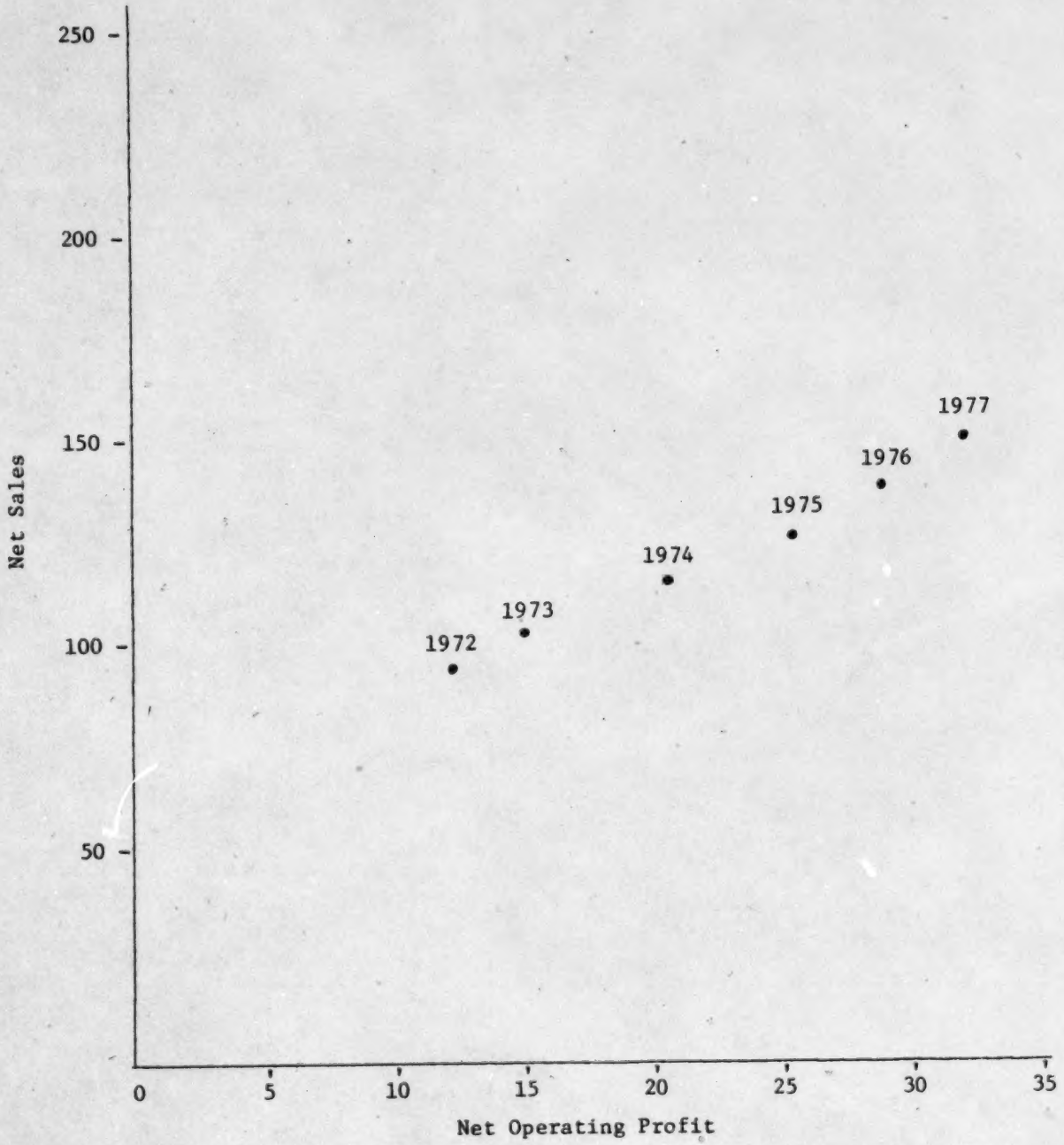
CHAPTER A. Use of Benchmark Comparisons in Illustrating Efficiency and Organization Factors

In this chapter there are numerous charts and graphs constructed for the Brown Furniture problem. The presentation of these graphs in a pictorial form is much more effective than trying to verbalize the information. Explaining to a student that the current asset to current liability ratio has improved considerably since 1972 means little or nothing. Presenting a graphical explanation will show the student that the ratio has increased from 1.90 to 5.33 over the 6 year period. When this information is compared to industry ratios, a meaningful relationship should begin to form. The instructor should anticipate numerous questions concerning ratios and trends. Questions such as, why is my net operating profit margin only 11% when the industry average is 15%? or why is my inventory turnover ratio 6.83 when the average for my type of business is only 4.8?, will require the instructor to have an indepth understanding of the business and industry ratios to effectively answer these questions. The graphs and charts included in this chapter can be valuable tools in answering the many questions that the students may ask. Instructors should refer to Volume III - Curriculum, for the strategies needed for classroom presentation of these comparisons.

HISTORICAL RATIO ANALYSIS

	1972	1973	1974	1975	1976	1977
Total Sales	$ 95,000	$104,000	$117,000	$129,000	$142,000	$153,000
Gross Profit	25,650	31,200	42,120	48,375	54,670	61,016
Net Operating Profits	12,350	15,600	21,060	25,800	28,400	32,000
Gross Profit	27%	30%	36%	38%	39%	40%
Net Operating Proft	13%	15%	18%	20%	20%	21%
Current A/Current L	1.90	2.50	3.25	3.80	4.04	5.33
Current L/Inv	1.47	1.20	.81	.52	.281	.47
Fix A/OE	1.85	1.40	1.15	1.25	1.175	.614
L & Bldg/LT Liab	5.20	4.37	2.91	1.45	.844	.896
TA/TL	1.29	1.40	1.48	1.56	1.687	2.338
TA/OE	6.62	4.45	4.27	3.63	2.455	1.748
Quick Ratio	1.47	2.12	2.54	1.75	.478	3.189
RLM	$ 9,235	$ 13,640	$ 17,500	$ 21,300	$ 26,500	$ 30,170
CLM	15,340	16,410	21,060	25,900	29,200	33,115
Inv. Turnover	4.35	5.72	6.43	5.96	6.80	6.83
Rec. Turnover	10.65	16.79	26,41	30.72	34.47	27.93
Coll. Period	17.50	14.75	11.94	12.36	10.45	12.89
Net Sales/OE	$ 1.75	$ 1.93	$ 2.07	$ 2.56	$ 2.74	$ 3.11
Net Sales/Ave Inv	5.00	4.83	4.60	4.98	5.30	5.90
Net Sales/W. Cap	1.97	2.15	2.35	2.80	3.10	3.37
Return/hr on Op & Unpaid	6.45	9.13	9.67	10.43	11.30	12.47
% Return on Bus Inv	20%	31%	36%	39%	40%	42.36%

BROWN FURNITURE



DEPARTMENTAL BREAKDOWN OF GROSS MARGINS

A longitudinal study within the business, information from Table 3

	Year 1 1972		Year II 1973		Year III 1974		Year IV 1975		Year V 1976		Year VI 1977	
Gross Profit (Business) (T3 L599)	$ 25,650	100%	$ 31,200	100%	$ 42,120	100%	$ 48,375	100%	$ 54,670	100%	$ 61,016	100%
DEPARTMENTAL												
Gross Profit (_____) (T3 L599.01)	$ 7,438	29%	$ 8,424	27%	$ 9,688	23%	$ 9,675	20%	$ 12,027	22%	$ 12,822	21%
Gross Profit (_____) (T3 L599.02)	$ 6,156	24%	$ 6,552	21%	$ 8,003	19%	$ 9,191	19%	$ 10,934	20%	$ 12,767	21%
Gross Profit (_____) (T3 L599.03)	$ 3,848	15%	$ 4,056	13%	$ 6,739	16%	$ 8,224	17%	$ 9,295	17%	$ 11,856	19%
Gross Profit (_____) (T3 L599.04)	$ 2,822	11%	$ 4,368	14%	$ 5,896	14%	$ 7,740	16%	$ 9,840	18%	$ 12,172	20%
Gross Profit (_____) (T3 L599.05)	$ 5,130	20%	$ 7,176	23%	$ 9,267	22%	$ 11,610	24%	$ 11,481	21%	$ 9,703	16%
Gross Profit (_____) (T3 L599.06)	$ 256	1%	$ 624	2%	$ 2,527	6%	$ 1,935	4%	$ 1,093	2%	$ 1,696	3%
Gross Profit (_____) (T3 L599.07)												
Gross Profit (_____) (T3 L599.08)												
Notes on Irregularities or Changes												

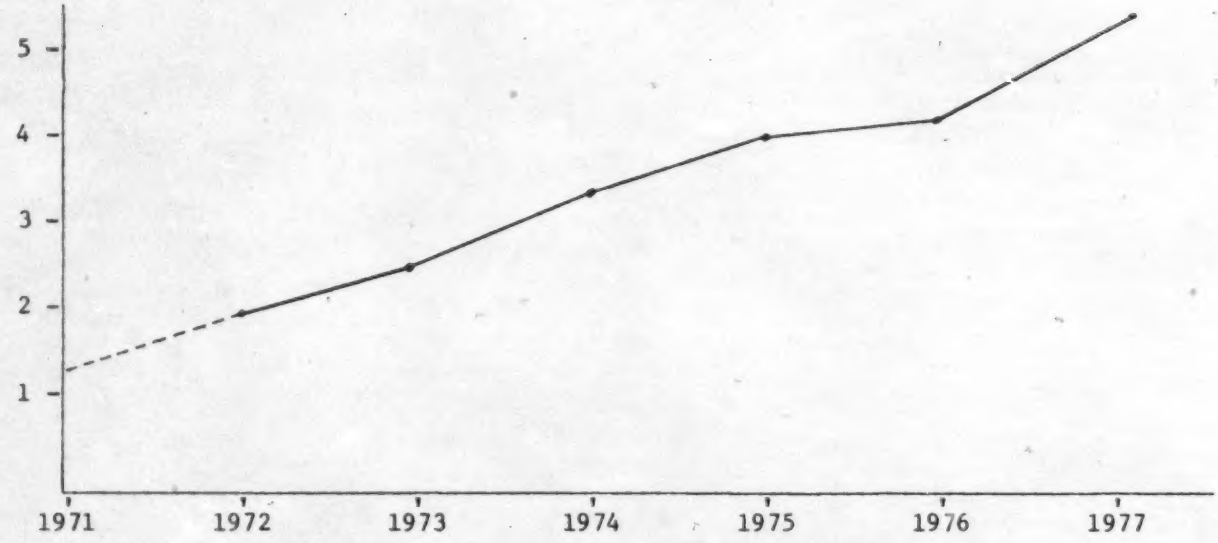
COMPARATIVE INCOME AND EXPENSE STATEMENTS
- BUSINESS ONLY -

		Ratio	Dept. 1	Dept. 2	Dept. 3	Dept. 4	Dept. 5	Dept. 6
400	Income							
421	Merchandise Sales	$152,107						
460	Customer Labor	1,696						
475	Net Sales of Goods & Serv.	$153,803	$ 34,850	$ 32,693	$ 32,230	$ 37,099	$ 15,235	$ 1,696
500	Cost of Goods & Services Sold	%	%	%	%	%	%	%
121	Beginning Inventory	19.25	16.07	24.78	22.18	16.74	16.74	--
521	Merchandise Purchased	54.68	58.14	66.85	51.51	56.43	29.18	--
550	Freight In Costs	.80	.57	.98	.61	.53	2.11	--
561	Sublet Labor	.24	1.06	--	--	--	--	--
A	Goods or Services Available	74.97	75.83	92.61	74.31	73.70	48.03	--
121	Ending Inventory	14.65	12.63	31.66	11.09	6.51	11.72	--
598	Cost of Goods or Services Sold	60.33	63.21	60.95	63.21	67.19	36.31	--
599	Gross Profit From Sales	39.67	36.79	39.05	36.79	32.81	63.69	100
		$ 61,016	$ 12,822	$ 12,767	$ 11,856	$ 12,172	$ 9,703	$ 1,696
600	Expenses							
609	Paid Family Labor	.33	.39	.31	.31	.27	.49	1.47
610	Salaries & Wages	8.72	7.70	8.20	8.32	7.23	13.21	39.62
611	Payroll Taxes	.51	.45	.48	.48	.42	.77	2.30
612	Advertising	.40	.26	.46	.29	.25	1.00	1.77
613	Heat	.63	.42	.74	.45	.39	1.59	2.89
614	Electricity	.34	.23	.40	.25	.21	.86	1.65
616	Telephone	.15	.10	.18	.11	.09	.39	.77
617	Insurance	.55	.37	.65	.40	.35	1.39	2.48
618	Interest	.95	.44	.76	.47	.41	1.63	29.48
619	Repair & Maint. Land	.09	.06	.11	.07	.06	.23	.47
620	Repair & Maint. Bldgs.	.61	.40	.72	.44	.38	1.55	2.77
621	Repair & Maint. Equip & Fix	.12	.09	.13	.10	.09	.22	.41
622	Repair & Maint. Vehicles	.32	--	--	--	--	--	29.42
623	Gas, Oil & Grease	.66	--	--	--	--	--	59.55
624	Legal & Accounting	.18	.12	.22	.13	.11	.47	.88
625	Property Taxes	1.08	.72	1.27	.78	.67	2.73	4.89
629	Entertainment & Promotion	.01	--	.03	--	--	--	--
631	Licenses	.13	--	--	--	--	--	11.38
635	Depr. Bldgs.	.96	.64	1.13	.69	.60	2.43	4.36
636	Depr. Equip & Fix	.42	.37	.39	.40	.35	.84	--
637	Depr. Vehicles	.60	--	--	--	--	--	54.83
634	Depr. Total	1.99	1.01	1.53	1.09	.95	3.27	59.20
639	Rent	.98	.69	1.19	.74	.65	2.56	--
643	Postage	.01	.01	.02	.01	.01	.02	--
650	Supplies	.14	.10	.17	.11	.09	.37	--
698	Total Expenses & Deductions	18.89	13.44	17.56	14.54	12.63	32.75	251.42
699	Net Operating Profit	20.79	23.35	21.49	22.25	20.18	30.94	(151.42)
		$ 31,970	$ 8,138	$ 7,027	$ 7,171	$ 7,488	$ 4,714	$ (2,568)

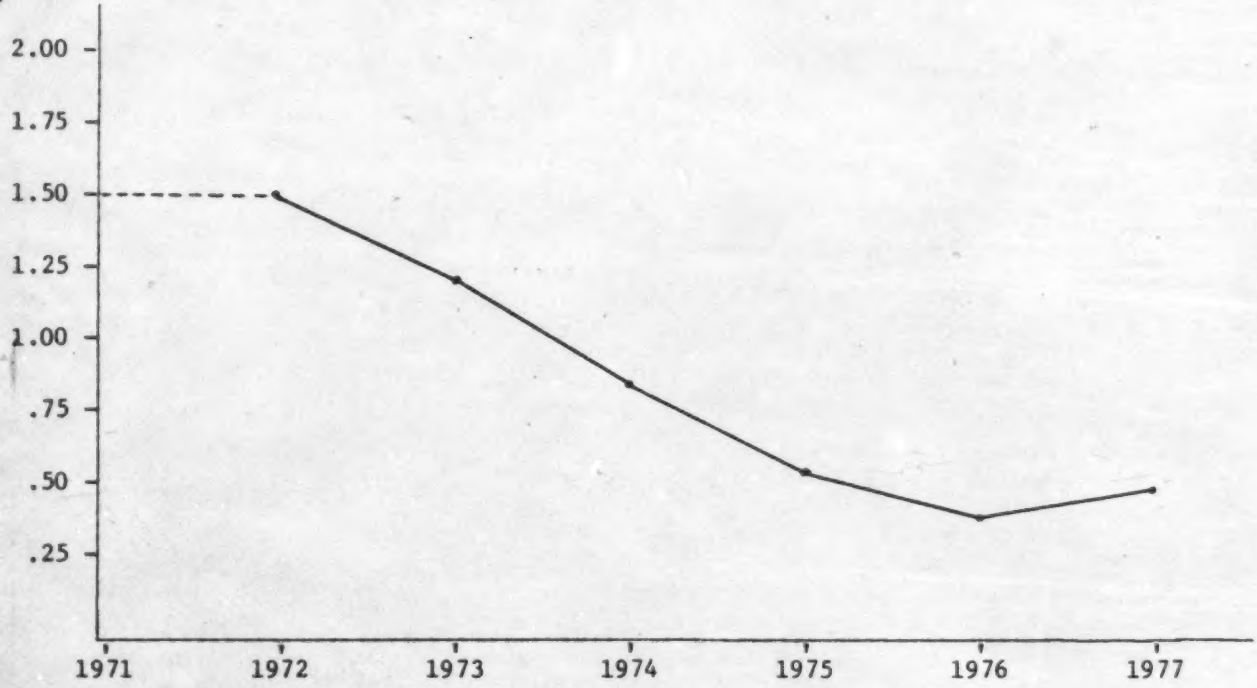
COMPARATIVE OPERATING RESULTS

		1977	1976	Amount Change	% Change
475	Net Sales	$153,803	$142,000	$ 11,803	8.3%
598	Cost of Goods Sold	92,787	87,330	5,457	6.2
599	Gross Profit	61,016	54,670	6,346	11.6
610	Salaries & Wages	14,692	12,640	2,052	16.2
612	Advertising	610	1,200	(590)	49.1
617	Utilities	1,734	1,540	194	12.5
618	Interest	1,456	1,680	(224)	13.3
620	Repair & Maintenance	1,759	1,310	449	34.2
634	Depreciation	3,054	2,845	209	7.3
660	Other Operating Expenses	5,741	5,055	686	13.5
698	Total Exp. & Deductions	29,046	26,270	2,776	10.5
699	Net Operating Profit	31,970	28,400	3,570	12.5

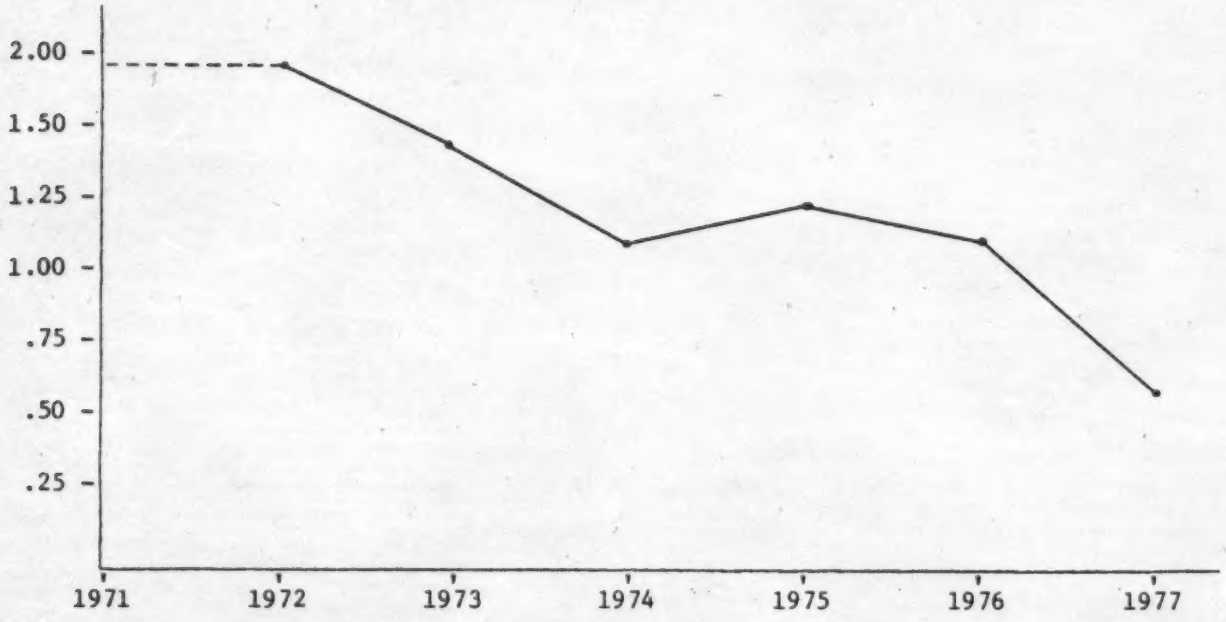
CURRENT ASSETS TO CURRENT LIABILITIES



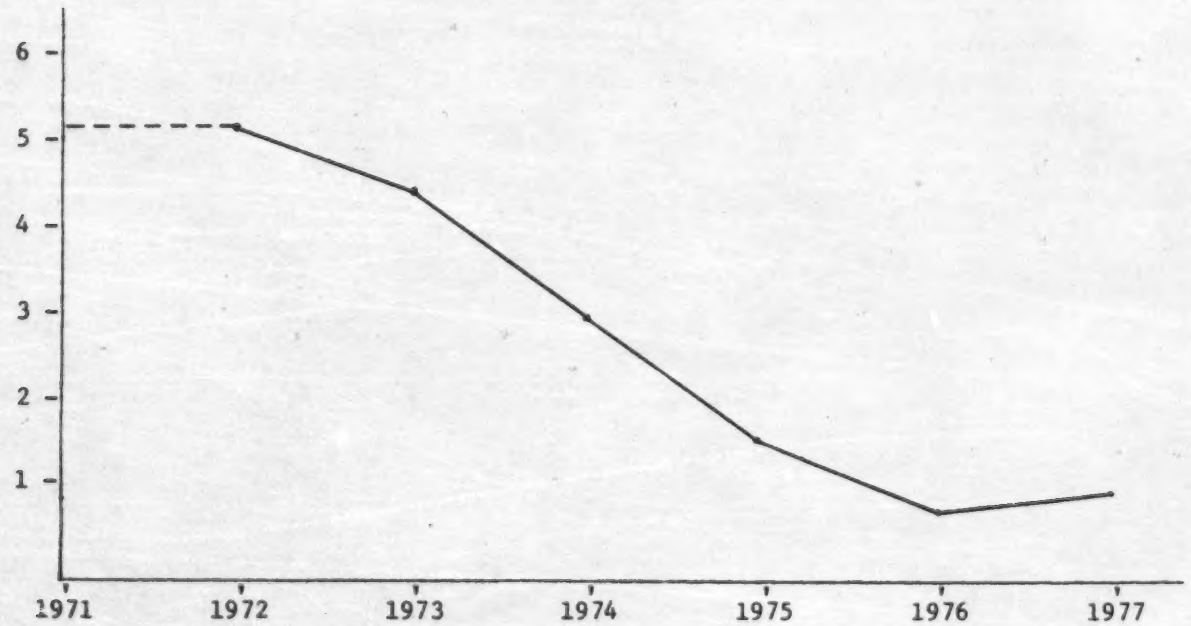
CURRENT LIABILITIES TO INVENTORY



FIXED ASSETS TO OWNERS EQUITY



LAND & BUILDINGS TO LONG TERM LIABILITY



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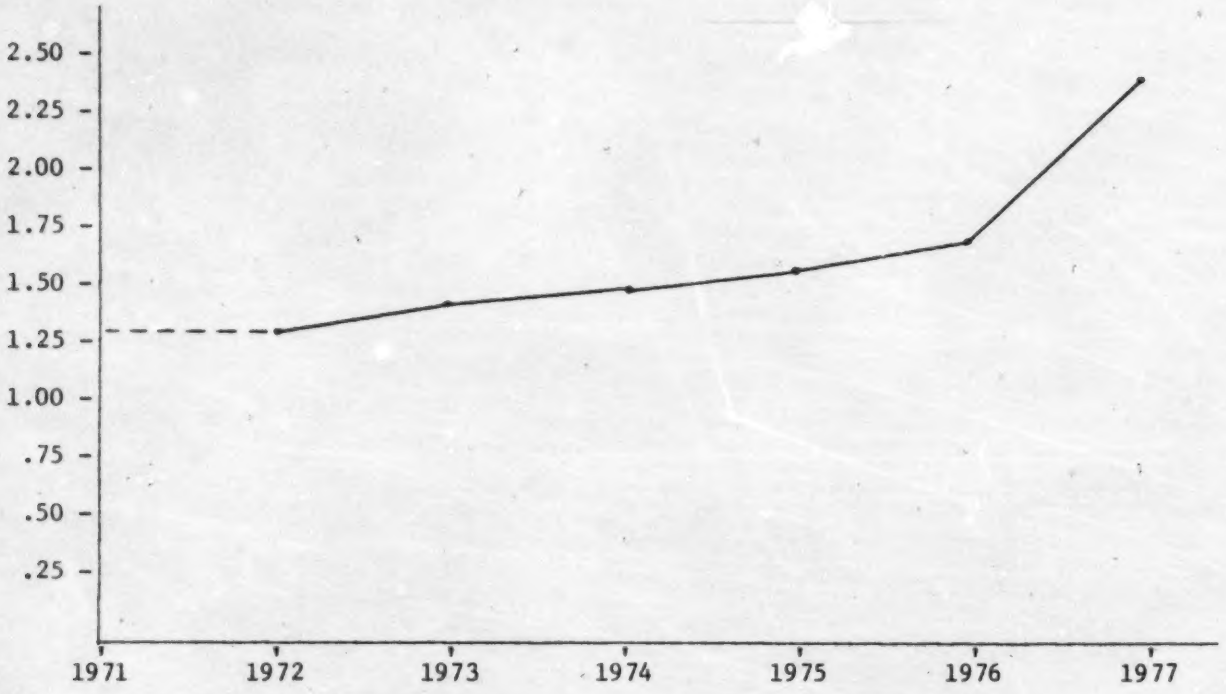
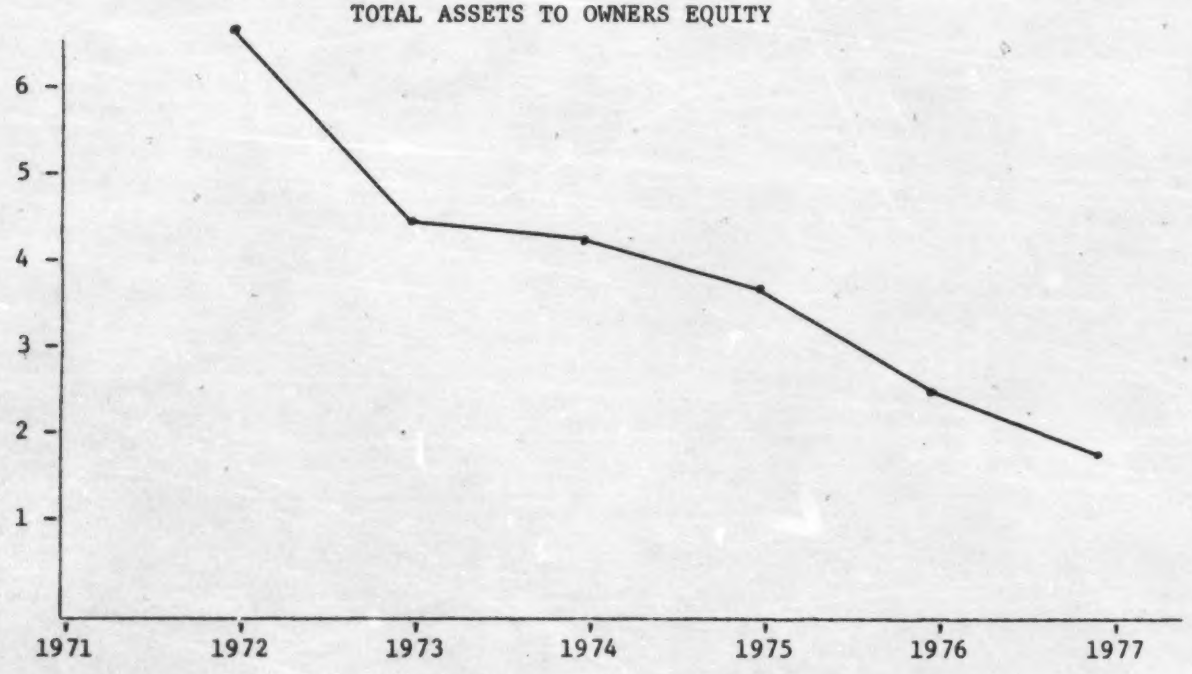


TOTAL ASSETS TO OWNERS EQUITY



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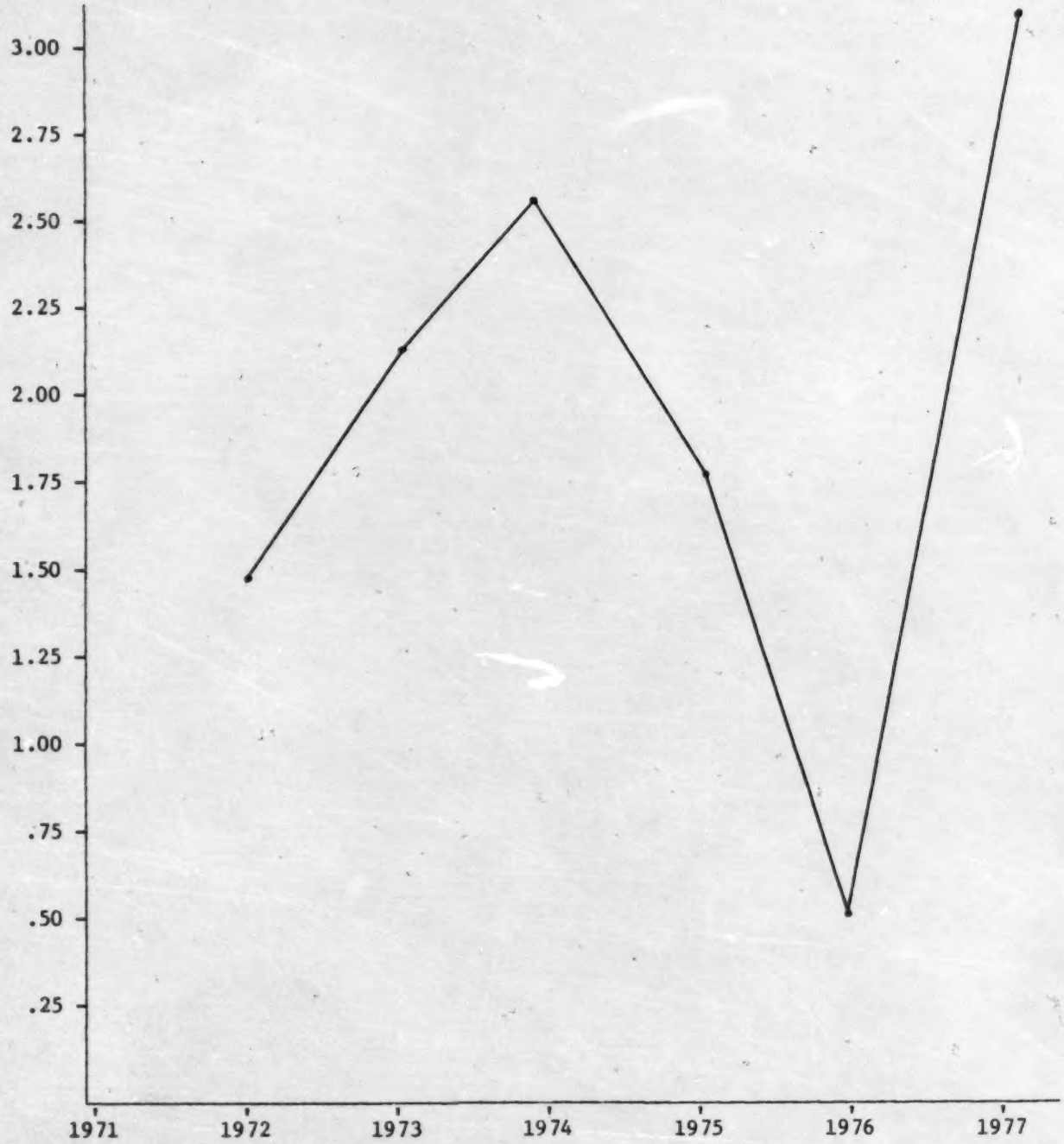
3.00
2.75
2.50
2.25
2.00
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1971
1972
1973
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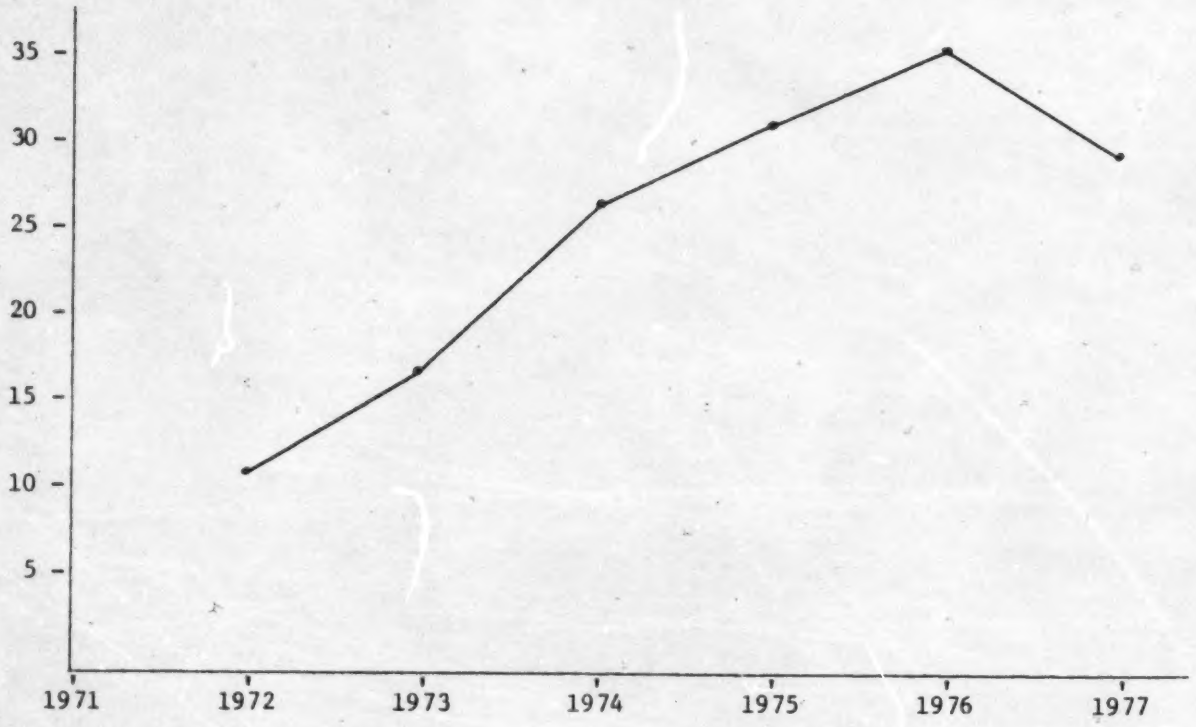
1975
1976
1977

RECEIVABLE TURNOVER



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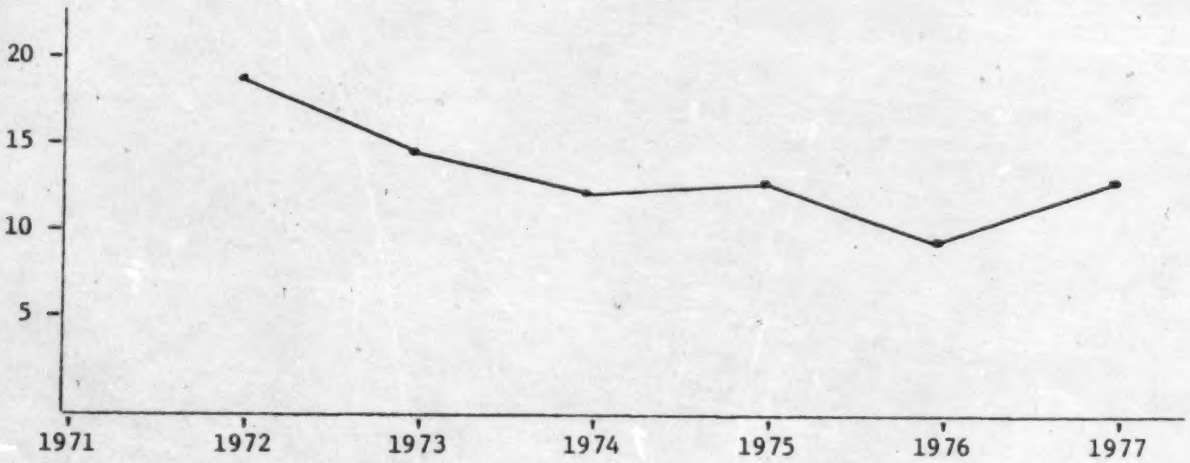
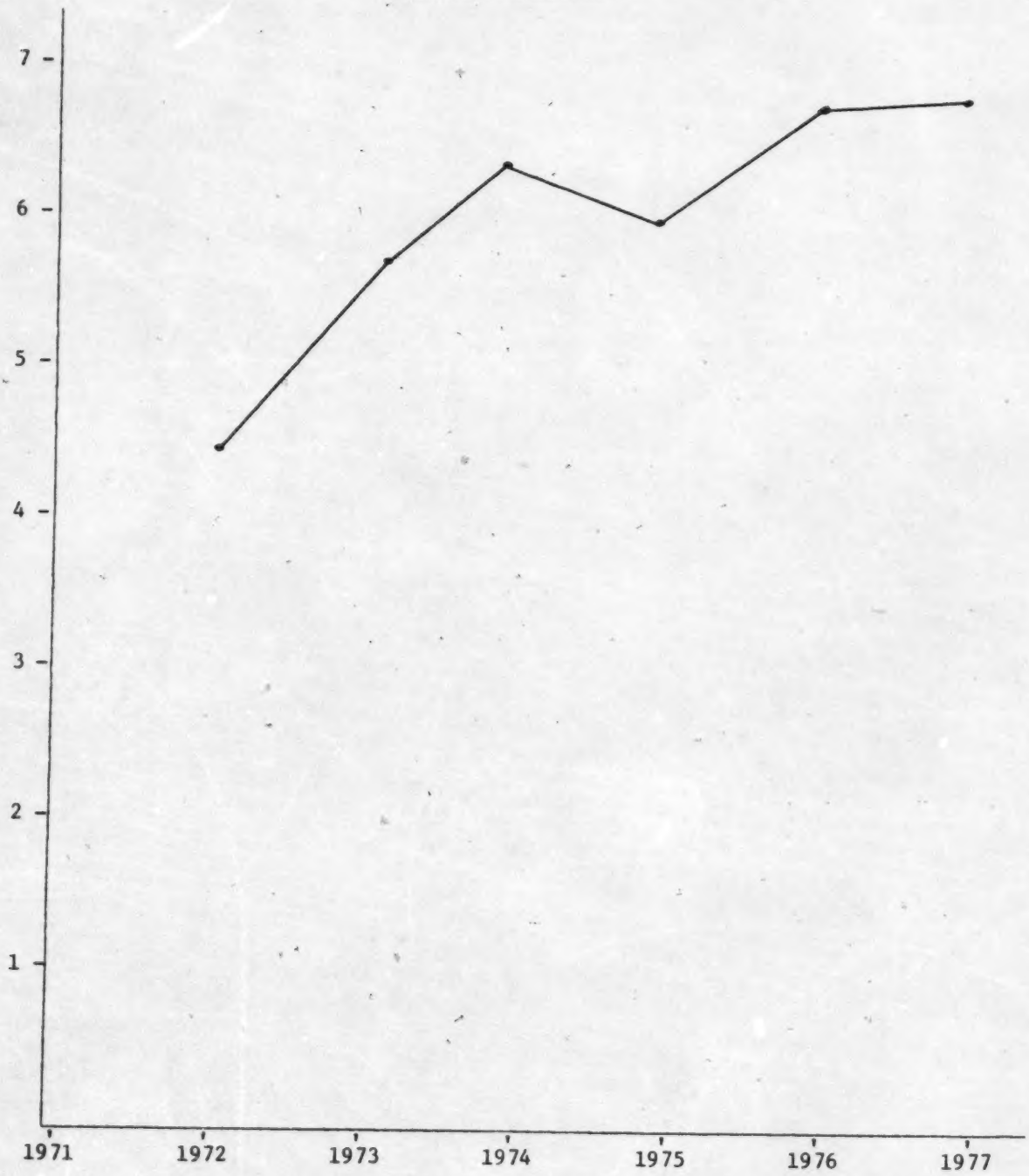


INVENTORY TURNOVER



CHAPTER B. The Business Visit

After the instructor has received the student's analysis from the computer center it should be checked for errors and omissions. If everything seems to be in order a decision must be made. Do I mail the analysis to the student, deliver it personally, or do I wait and hand out the analysis at the next class meeting? All three of these techniques have been used in the past. Which one is correct? It is up to the individual instructor to make the decision. Many times the instructor will receive the analysis over a two month period. Is it fair to hold onto a student's analysis for two months while waiting for all the students to get theirs? Because of this, it is recommended that the instructor return the analysis as soon as it has been reviewed.

The techniques used for the at-the-business visit have been well documented in Volume III - Curriculum. These techniques have been tested by past and present instructors and have been found to be successful. It is up to the individual instructor to develop their own style and method of presentation. No one will become an effective instructor by strictly "going by the book," leeway and adjustments are necessary because of variations in student abilities, interest, objectives and instructor time constraints, and expertise.

Part I will give the instructor the necessary technical information needed to interpret the analysis. This part of the manual should be understood completely before any at-the-business visit is made. The relationship of the information received from the analysis, the established business plan and the goals and objectives of the student will make each presentation an individualized experience.

CHAPTER C. Business Analysis Summary Meeting

This chapter and Chapter D are meant as guidelines for the instructor. The outline format is to be developed individually by the instructors.

Many of the ratios and comparisons used in the analysis are meaningful to all the students. These should be utilized in the analysis summary meeting. Net profit ratios, return per hour on labor, return on assets, etc. are all ratios that pertain to most businesses. These should be used to stimulate interest in all the students.

Differences will occur from business to business and type to type in the interpretation of the analysis. Different business practices such as inventory valuation methods, credit policies, etc. will have a dynamic effect on individual student's analysis. This should be stressed so that students with like businesses and unlike analysis do not become overly concerned.

During this summary meeting, reference again should be made to personal and business goals and objectives. These must be stressed in the light of how to interpret the analysis and how to successfully plan for the future.

Outline:

1. Interpreting business analysis data that impacts on all students.
2. Linking differences in business to operational practices.
3. Instructional practice useful in discovering reasons for high or low net profits without disclosing names.
4. Guidelines for the students to use in interpreting their own analysis.
5. The analysis meeting: A guide to successful planning.

CHAPTER D. Classroom Use of Individual And Group Analysis Data

As mentioned earlier, this chapter is meant as only an outline for the instructor. Lessons have been developed in Volume III - Curriculum which will assist the instructor in this phase of the classroom instruction. The instructor will have to tailor the lessons around student needs and wants. All instructors must remember that they are small business management educators not necessarily business consultants. As a consultant, you make the decisions for the business operator as an educator you bring forth the facts and allow the operators to use this data in their own decision making. Never allow yourself the luxury of making the decisions for the business operator. Your function at this point in the program is to supply the necessary education and information so that the business operator can make sound business decisions.

Outline:

1. Building lessons around analysis of:

    a. Business size
    b. Labor efficiency
    c. Overhead
    d. Turnover
    e. Credit control
    f. Ratios and measures
    g. Monthly and yearly comparisons between groups and individuals.

2. Increasing efficiency and improving techniques in record keeping.

3. Guidelines for assisting students to learn and use correct management terms as a part of the discussion.